

SPACE OPERATIONS CONTROL CENTER SATELLITE SITUATION REPORT

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GODDARD SPACE FLIGHT CENTER

GREENBELT, MD.

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SPACE OPERATIONS CONTROL CENTER
GODDARD SPACE FLIGHT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 5, NO. 15

AUGUST 15, 1965

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED
BY THE GODDARD SPACE FLIGHT CENTER, NORAD, AND SMITHSONIAN
ASTROPHYSICAL OBSERVATORY AS OF 1200Z ON AUGUST 15, 1965.

OBJECT	CODE NAME	CATALOGUE NUMBER	OBJECTS IN ORBIT				PERIGEE Km.	APOGEE Km.	INCL I- NATION	PERIOD MINUTES	TRANSMITTING FREQ. (MC/S)
			SOURCE	LAUNCH							
1958 LAUNCHES											
ALPHA 1	EXPLORER 1	004	US	1 FEB	104.1	33.19	329	1569			
BETA 1	ROCKET BODY	016	US	17 MAR	138.4	34.24	649	4319			
BETA 2	VANGUARD 1	005	US	17 MAR	134.0	34.23	658	3930			
1959 LAUNCHES											
ALPHA 1	VANGUARD 2	011	US	17 FEB	125.4	32.87	559	3282			
ALPHA 2	ROCKET BODY	012	US	17 FEB	129.7	32.92	554	3658			
ETA 1	VANGUARD 3	020	US	18 SEP	129.8	33.34	511	3716			
MU 1	LUNIK 1	112	USSR	2 JAN	HELIOCENTRIC ORBIT						
NU 1	PIONEER 4	113	US	3 MAR	HELIOCENTRIC ORBIT						
IOTA 1	EXPLORER 7	022	US	13 OCT	101.1	50.31	555	1070			
IOTA 2	ROCKET BODY	023	US	13 OCT	100.9	50.28	554	1048			
1960 LAUNCHES											
ALPHA 1	PIONEER 5	027	US	11 MAR	HELIOCENTRIC ORBIT						
BETA 1	ROCKET BODY	028	US	1 APR	99.1	48.38	697	734			
BETA 2	TIROS 1	029	US	1 APR	99.2	48.39	697	742			
BETA 3	NONE	101	US	1 APR	97.9	48.49	613	699			
BETA 4	NONE	115	US	1 APR	99.9	48.15	699	805			
GAMMA 2	TRANSIT 1B	031	US	13 APR	93.6	51.26	341	563			
GAMMA 4	NONE	099	US	13 APR	96.7	51.24	477	725			
EPSILON 3	NONE	036	USSR	15 MAY	89.6	64.97	209	299			
ZETA 1	MIDAS 2	043	US	24 MAY	94.3	33.02	471	494			
ETA 1	TRANSIT 2A	045	US	22 JUN	101.6	66.71	614	1057			
ETA 2	GREB	046	US	22 JUN	101.6	66.73	613	1055			
ETA 3	ROCKET BODY	047	US	22 JUN	101.4	66.70	609	1042			
ETA 4		840	US	22 JUN	101.5	66.74	616	1048			
ETA 5		841	US	22 JUN	101.5	66.72	607	1053			

OBJECTS IN ORBIT									
OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCL I- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1960 LAUNCHES (CONT'D)									
IOTA 1	ECHO 1	049	US	12 AUG	113.4	47.27	1771	997	
IOTA 2	ROCKET BODY	050	US	12 AUG	118.1	47.27	1684	1503	
IOTA 3	METAL OBJECT	051	US	12 AUG	118.2	47.27	1685	1518	
IOTA 4	METAL OBJECT	052	US	12 AUG	CURRENT ELEMENTS NOT MAINTAINED				
IOTA 5	METAL OBJECT	053	US	12 AUG	118.4	47.34	1686	1535	
NU 1	COURIER 1B	058	US	4 OCT	107.0	28.31	1211	964	
NU 2	ROCKET BODY	059	US	4 OCT	106.6	28.23	1213	919	
XI 1	EXPLORER 8	060	US	3 NOV	112.3	49.97	2245	416	
XI 2	ROCKET BODY	062	US	3 NOV	111.8	50.00	2198	418	
XI 3	NONE	069	US	3 NOV	108.8	49.39	1945	400	
XI 4	NONE	105	US	3 NOV	110.2	50.49	2058	417	
PI 1	TIROS 2	063	US	23 NOV	98.2	48.53	730	617	
PI 2	ROCKET BODY	064	US	23 NOV	98.1	48.52	723	610	
PI 3	NONE	074	US	23 NOV	98.1	48.52	719	621	
PI 4	NONE	075	US	23 NOV	98.3	48.52	733	620	
1961 LAUNCHES									
ALPHA 1	SAMOS 2	070	US	31 JAN	94.7	97.39	543	467	
ALPHA 2	METAL OBJECT	079	US	31 JAN	94.6	97.40	536	464	
GAMMA 1	VENUS PROBE	080	USSR	12 FEB	HELIOCENTRIC ORBIT				
DELTA 2	ROCKET BODY	082	US	16 FEB	118.5	38.85	2595	632	
DELTA 3	NONE	085	US	16 FEB	CURRENT ELEMENTS NOT MAINTAINED				
KAPPA 1	EXPLORER 10	098	US	25 MAR	POSITION UNCERTAIN				
NU 1	EXPLORER 11	107	US	27 APR	107.9	28.77	1781	478	
OMICRON 1	TRANSIT 4A	116	US	29 JUN	103.8	66.84	1003	876	
OMICRON 2	INJUN-SR-3	117	US	29 JUN	103.8	66.83	1002	878	
OMICRON 3-208**	METAL OBJECTS		US	29 JUN					
RHO 1	TIROS 3	162	US	12 JUL	100.4	47.90	811	743	
									\$54\$324\$150\$400

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCL-I- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (Mc/S)</u>
1961 LAUNCHES (CONT'D)									
RHO 2	ROCKET BODY	165	US	12 JUL	100.3	47.91	808	740	
RHO 3	METAL OBJECT	166	US	12 JUL	98.8	47.93	795	610	
RHO 4	METAL OBJECT	167	US	12 JUL	102.0	47.85	932	773	
SIGMA 1	MIDAS 3	163	US	12 JUL	161.5	91.37	3540	3352	
SIGMA 3	METAL OBJECT	188	US	12 JUL	161.2	91.17	3536	3336	
SIGMA 4	METAL OBJECT	196	US	12 JUL	161.9	91.23	3577	3347	
UPSILON 1	EXPLORER 12	170	US	16 AUG	CURRENT ELEMENTS	NOT MAINTAINED			
A DELTA 1	MIDAS 4	192	US	21 OCT	166.0	95.94	3755	3498	
A DELTA 3	METAL OBJECT	194	US	21 OCT	165.6	95.85	3742	3479	
A DELTA 4	METAL OBJECT	195	US	21 OCT	166.4	95.83	3801	3486	
A ETA 1	TRANSIT 4B	202	US	15 NOV	105.8	32.42	1103	956	
A ETA 2	TRAAC	205	US	15 NOV	105.8	32.40	1108	953	
A ETA 3	ROCKET BODY	204	US	15 NOV	105.6	32.43	1095	951	
1962 LAUNCHES									
ALPHA 1	RANGER 3	221	US	26 JAN	HELIOCENTRIC ORBIT				
ALPHA 2	ROCKET BODY	222	US	26 JAN	HELIOCENTRIC ORBIT				
BETA 1	TIROS 4	226	US	8 FEB	100.4	48.30	844	707	
BETA 2	ROCKET BODY	227	US	8 FEB	101.4	48.12	941	703	
BETA 3	METAL OBJECT	228	US	8 FEB	99.5	48.40	762	703	
BETA 4	METAL OBJECT	229	US	8 FEB	100.3	48.30	844	700	
ZETA 1	ORB.SOL.OBS.1	255	US	7 MAR	96.0	32.85	587	546	
ZETA 2	ROCKET BODY	257	US	7 MAR	96.0	32.83	584	545	
KAPPA 1		271	US	9 APR	153.0	86.70	3404	2793	
KAPPA 3		273	US	9 APR	152.6	86.67	3365	2801	
KAPPA 4		274	US	9 APR	153.3	86.67	3423	2802	
MU 2	ROCKET BODY	282	US	23 APR	HELIOCENTRIC ORBIT				
OMICRON 1	ARIEL 1	285	US/UK	26 APR	100.4	53.92	1164	392	136.405
OMICRON 2	ROCKET BODY	288	US	26 APR	100.3	53.90	1153	389	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)	
1962 LAUNCHES (CONT'D)										
A ALPHA 1	TIROS 5	309	US	19 JUN	100.5	58.13	970	592		
A ALPHA 2	ROCKET BODY	311	US	19 JUN	100.4	58.13	965	587		
A ALPHA 3	METAL OBJECT	312	US	19 JUN	101.7	58.20	1085	597		
A ALPHA 4	METAL OBJECT	313	US	19 JUN	99.1	57.98	852	578		
A EPSILON 1	TELSTAR 1	340	US	10 JUL	157.8	44.80	5645	943		
A EPSILON 2	ROCKET BODY	341	US	10 JUL	157.6	44.01	5596	978		
A OMICRON 1		369	US	23 AUG	99.5	98.69	855	619		
A OMICRON 2		370	US	23 AUG	98.2	98.63	750	600		
A OMICRON 3		378	US	23 AUG	100.8	98.75	967	627		
A OMICRON 4		388	US	23 AUG	99.5	98.69	851	621		
A RHO 1	MARINER 2	374	US	27 AUG	HELIOCENTRIC ORBIT					
A RHO 2	ROCKET BODY	375	US	27 AUG	HELIOCENTRIC ORBIT					
A PSI 1	TIROS 6	397	US	18 SEP	98.7	58.35	710	686		
A PSI 2	ROCKET BODY	398	US	18 SEP	98.7	58.35	709	680		
A PSI 3	METAL OBJECT	399	US	18 SEP	99.4	58.44	769	689		
A PSI 4	METAL OBJECT	400	US	18 SEP	98.0	58.23	684	645		
B ALPHA 1	ALOUETTE	424	CANADA	29 SEP	105.5	80.48	1035	1000	\$136.591\$136.078	
B ALPHA 2	ROCKET BODY	426	US	29 SEP	105.4	80.49	1027	1004		
B ALPHA 3	METAL OBJECT	510	US	29 SEP	105.4	80.52	1021	1004		
B ALPHA 4	METAL OBJECT	511	US	29 SEP	105.5	80.44	1041	995		
B GAMMA 1	EXPLORER 14	432	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED					
B GAMMA 2#	ROCKET BODY	NNA	US	2 OCT	CURRENT ELEMENTS NOT MAINTAINED					
B ETA 1	RANGER 5	439	US	18 OCT	HELIOCENTRIC ORBIT					
B ETA 2	ROCKET BODY	440	US	18 OCT	HELIOCENTRIC ORBIT					
B KAPPA 1		444	US	27 OCT	125.1	71.30	3619	187		
B LAMBDA 1	EXPLORER 15	445	US	27 OCT	311.7	18.04	17379	307		
B LAMBDA 2#	ROCKET BODY	NNA	US	27 OCT	INSUFFICIENT OBSERVATIONS					
B MU 1	ANNA 1B	446	US	31 OCT	107.9	50.14	1181	1078	\$162\$324	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)	
1962 LAUNCHES (CONT'D)										
B MU 2	ROCKET BODY	447	US	31 OCT	107.6	50.20	1162	1072	\$136.140;136.621	
B NU 3		450	USSR	1 NOV	HELIOCENTRIC ORBIT					
B TAU 1		502	US	13 DEC	105.6	70.34	1811	230		
B TAU 2	INJUN 3	504	US	13 DEC	110.6	70.32	2273	238		
B TAU 4		508	US	13 DEC	97.6	70.30	1068	214		
B TAU 5		513	US	13 DEC	105.4	70.28	1795	231		
B TAU 6		520	US	13 DEC	109.6	70.29	2177	238		
B UPSILON 1	RELAY 1	503	US	13 DEC	185.1	47.49	7436	1322		
B UPSILON 2	ROCKET BODY	515	US	13 DEC	184.8	47.56	7406	1335		
B CHI 1	EXPLORER 16	506	US	16 DEC	104.4	52.05	1183	746		
B PSI 1	TRANSIT 5A	509	US	19 DEC	99.1	90.66	735	696		
B PSI 2		514	US	19 DEC	97.6	90.78	719	575		
B PSI 3		519	US	19 DEC	99.1	90.66	733	697		
B PSI 4		523	US	19 DEC	100.2	90.49	834	703		

1963 LAUNCHES

1963 03A		527	US	16 JAN	94.4	81.89	523	459	
1963 04A	SYNCOM 1	553	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 04B	ROCKET BODY	532	US	14 FEB	CURRENT ELEMENTS NOT MAINTAINED				
1963 05A		533	US	19 FEB	97.7	100.46	795	502	
1963 05B		534	US	19 FEB	97.7	100.46	795	503	
1963 05C		535	US	19 FEB	96.8	100.49	749	465	
1963 05D		536	US	19 FEB	98.3	100.49	820	538	
1963 08B		566	USSR	2 APR	BARYCENTRIC ORBIT				
1963 09A	EXPLORER 17	564	US	3 APR	93.8	57.63	678	245	
1963 13A	TELSTAR 2	573	US	7 MAY	225.3	42.76	10810	963	

OBJECTS IN ORBIT									
OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1963 LAUNCHES (CONT'D)									
1963 13B	ROCKET BODY	575	US	7 MAY	225.1	42.75	10796	959	
1963 14A		574	US	9 MAY	166.4	87.37	3668	3622	
1963 14B		579	US	9 MAY	166.4	87.00	4198	3094	
1963 14C		608	US	9 MAY	166.4	87.34	3684	3607	
1963 14D		589	US	9 MAY	CURRENT ELEMENTS NOT MAINTAINED				
1963 14E		602	US	9 MAY	166.1	87.40	3650	3613	
1963 14F		628	US	9 MAY	166.8	87.32	3669	3653	
1963 14G		629	US	9 MAY	166.4	87.36	3698	3592	
1963 14H		702	US	9 MAY	166.4	87.33	3673	3617	
1963 22A			594	US	16 JUN	99.7	90.01	757	733
1963 22B		603	US	16 JUN	99.7	90.01	762	728	
1963 22C		610	US	16 JUN	101.2	90.24	888	746	
1963 22D		611	US	16 JUN	98.1	89.83	768	570	
1963 24A	TIROS 7	604	US	19 JUN	97.4	58.27	645	626	\$136.233\$136.924
1963 24B	ROCKET BODY	605	US	19 JUN	97.3	58.26	636	626	
1963 24C	METAL OBJECT	606	US	19 JUN	97.9	58.38	669	635	
1963 24D	METAL OBJECT	607	US	19 JUN	96.9	58.11	634	584	
1963 25B		614	US	27 JUN	132.1	82.13	4094	339	
1963 26A	RESEARCH SATELLITE FOR GEOPHYSICS	612	US	28 JUN	102.0	49.81	1290	417	
1963 27A		613	US	29 JUN	94.6	82.33	521	484	
1963 30A		622	US	19 JUL	167.8	88.49	3731	3674	
1963 30B		635	US	19 JUL	167.0	89.48	4025	3299	
1963 30C		630	US	19 JUL	167.5	88.42	3721	3655	
1963 30D		624	US	19 JUL	167.6	88.04	4451	2936	
1963 30E		631	US	19 JUL	168.3	88.47	3780	3659	

OBJECT	CODE NAME	CATALOGUE NUMBER	OBJECTS IN ORBIT					PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
			SOURCE	LAUNCH								
1963 LAUNCHES (CONT'D)												
1963 31A	SYNCOM 2	634	US	26 JUL	1436.0	31.78	35810	35759				\$136.467\$136.980 \$1814.069 \$1815.794 \$1820.177
1963 31B	ROCKET BODY	625	US	26 JUL	CURRENT ELEMENTS	NOT MAINTAINED						
1963 38A		669	US	28 SEP	107.1	89.91	1114	1073				
1963 38B		670	US	28 SEP	107.4	89.91	1135	1076				
1963 38C		671	US	28 SEP	107.3	89.91	1133	1077				
1963 38D		672	US	28 SEP	107.3	89.92	1145	1063				
1963 38E		745	US	28 SEP	107.1	89.92	1111	1074				
1963 39A		674	US	17 OCT	6481.3	37.86	116496	101049				
1963 39B		675	US	17 OCT	CURRENT ELEMENTS	NOT MAINTAINED						
1963 39C		692	US	17 OCT	6512.3	37.76	115295	102986				
1963 43A		POLYOT 1	683	USSR	1 NOV	102.3	58.89	1398	334			
1963 43B	684		USSR	1 NOV	99.3	58.62	1130	318				
1963 43C	685		USSR	1 NOV	93.4	58.95	591	277				136.653\$162\$324
1963 43D	686		USSR	1 NOV	99.0	59.87	1071	347				
1963 46A	EXPLORER 18 CENTAUR 2	693	US	27 NOV	5610.7	35.20	192042	4385				
1963 47A		694	US	27 NOV	107.8	30.36	1772	475				
1963 47B		696	US	27 NOV	107.2	30.06	1612	582				
1963 47C		697	US	27 NOV	107.5	30.05	1636	578				
1963 47D		698	US	27 NOV	108.0	29.91	1655	613				
1963 47E		699	US	27 NOV	108.6	30.44	1745	577				
1963 47F		700	US	27 NOV	108.6	30.46	1754	571				
1963 47G		701	US	27 NOV	107.8	29.99	1643	606				
1963 47H		739	US	27 NOV	105.9	30.40	1583	486				
1963 49A		703	US	5 DEC	106.8	89.96	1095	1064				
1963 49B	704	US	5 DEC	107.1	89.95	1123	1067				\$150\$400	

OBJECT	CODE NAME	CATALOGUE NUMBER	OBJECTS IN ORBIT				INCL- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
			SOURCE	LAUNCH	PERIOD MINUTES					
1963 LAUNCHES (CONT'D)										
1963 49C	EXPLORER 19	705	US	5 DEC	107.1	89.95	1118	1070		
1963 49D		706	US	5 DEC	107.1	89.97	1122	1061		
1963 49E		715	US	5 DEC	107.1	89.96	1119	1068		
1963 49F		753	US	5 DEC	107.1	89.96	1115	1074		
1963 53A		714	US	19 DEC	115.2	78.65	2305	628		
1963 53B		721	US	19 DEC	115.8	78.60	2399	592		
1963 53C		722	US	19 DEC	115.8	78.58	2387	597		
1963 53D		723	US	19 DEC	115.8	78.60	2390	600		
1963 53E		724	US	19 DEC	115.9	78.62	2384	612		
1963 53F		725	US	19 DEC	115.8	78.61	2373	609		
1963 53G	726	US	19 DEC	115.8	78.59	2386	597			
1963 53H	TIROS 8	732	US	19 DEC	115.8	78.59	2385	599		
1963 54A		716	US	21 DEC	99.4	58.53	756	701		\$136.231\$136.924
1963 54B		717	US	21 DEC	99.3	58.53	751	698		
1963 54C		720	US	21 DEC	101.1	58.51	921	698		
1963 54D		736	US	21 DEC	97.7	58.50	706	589		
1964 LAUNCHES										
1964 01A	GGSE EGRS 1 SOLAR RAD.	727	US	11 JAN	103.4	69.94	931	914		
1964 01B		728	US	11 JAN	103.4	69.92	931	914		
1964 01C		729	US	11 JAN	103.4	69.92	933	912		136.805
1964 01D		730	US	11 JAN	103.5	69.92	932	913		136.886
1964 01E		731	US	11 JAN	103.5	69.92	931	914		
1964 02A	RELAY 2	733	US	19 JAN	101.3	99.10	849	792		
1964 02B		734	US	19 JAN	101.3	99.09	830	810		
1964 02C		735	US	19 JAN	101.3	99.10	836	807		
1964 03A		737	US	21 JAN	194.7	46.47	7419	2081		136.620\$136.142

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1964 LAUNCHES (CONT'D)									
1964 03B		738	US	21 JAN	194.8	46.37	7427	2077	
1964 04A	ECHO 2	740	US	25 JAN	108.2	81.46	1342	948	136.019;136.170
1964 04B		741	US	25 JAN	108.9	81.52	1308	1047	
1964 04C		742	US	25 JAN	108.8	81.50	1304	1044	
1964 04D		743	US	25 JAN	108.8	81.55	1310	1037	
1964 04E		749	US	25 JAN	95.5	81.54	793	287	
1964 05A	SATURN 5	744	US	25 JAN	92.5	31.43	534	248	
1964 06A	ELEKTRON 1	746	USSR	30 JAN	169.3	60.94	7096	420	
1964 06B	ELEKTRON 2	748	USSR	30 JAN	1356.3	58.63	67045	1376	
1964 06C		750	USSR	30 JAN	168.0	60.90	7008	405	
1964 06D		751	USSR	30 JAN	1384.1	58.69	68105	1419	
1964 11A		759	US	28 FEB	94.6	82.08	507	490	
1964 11B		760	US	28 FEB	90.5	82.03	284	284	
1964 11C		761	US	28 FEB	92.2	82.07	379	379	
1964 15A	ARIEL 2	771	US/UK	27 MAR	99.9	51.73	1216	291	136.557
1964 15B		775	US	27 MAR	99.3	51.74	1164	282	
1964 15C		847	US	27 MAR	103.4	51.37	1475	366	
1964 16D		785	USSR	2 APR	HELIOCENTRIC ORBIT				
1964 19B	POLYOT 2	784	USSR	12 APR	91.5	58.05	412	286	
1964 26A		801	US	4 MAY	103.1	90.50	947	864	\$150\$400
1964 26B		805	US	4 MAY	103.9	90.21	979	906	
1964 26C		806	US	4 MAY	102.3	90.86	950	787	
1964 26D		809	US	4 MAY	103.1	90.51	951	860	
1964 31A		812	US	18 MAY	101.6	99.78	839	830	
1964 31B		813	US	18 MAY	101.6	99.76	837	834	
1964 31C		815	US	18 MAY	101.6	99.78	846	822	
1964 35A		824	US	2 JUN	94.8	82.09	525	498	

OBJECTS IN ORBIT							TRANSMITTING FREQ. (MC/SEC)
OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLINATION	
							PERIGEE Km.
							APOGEE Km.
1964 LAUNCHES (CONT'D)							
1964 38A	ELEKTRON 3	829	USSR	10 JUL	168.1	60.83	7019
1964 38B	ELEKTRON 4	830	USSR	10 JUL	1313.8	59.28	405
1964 38C		831	USSR	10 JUL	168.4	60.84	919
1964 38D		832	USSR	10 JUL	1341.3	59.48	405
1964 40A		836	US	17 JUL	6024.8	38.83	66905
1964 40B		837	US	17 JUL	6004.3	40.64	102402
1964 40C		838	US	17 JUL	2349.2	38.30	92798
1964 41B		843	US	28 JUL	BARYCENTRIC ORBIT		319
1964 45B		851	US	14 AUG	126.6	95.69	269
1964 47A	SYNCOM 3	858	US	19 AUG	1436.2	.10	35784
							\$136.470\$136.980
							\$1820.177\$1815.794
							\$1814.931
1964 47B		862	US	19 AUG	CURRENT ELEMENTS NOT MAINTAINED		
1964 49D	COSMOS 41	869	USSR	22 AUG	714.8	66.06	790
1964 49E		898	USSR	22 AUG	718.3	65.95	525
1964 50A	COSMOS 42	864	USSR	22 AUG	93.6	48.95	217
1964 50C	COSMOS 43	867	USSR	22 AUG	93.6	48.93	219
1964 51A	EXPLORER 20	870	US	25 AUG	103.9	79.91	868
							\$136.326\$136.350
							\$136.680
1964 51B		871	US	25 AUG	103.9	79.92	865
1964 51C		873	US	25 AUG	103.4	79.84	847
1964 51D		874	US	25 AUG	103.4	79.84	799
1964 51E		875	US	25 AUG	103.4	79.83	786
1964 52A	NIMBUS 1	872	US	28 AUG	98.3	98.66	428
1964 52B		878	US	28 AUG	98.3	98.66	426

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLIN- ATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/SEC)</u>
<u>1964 LAUNCHES (CONT'D)</u>									
1964 53A	COSMOS 44	876	USSR	28 AUG	99.5	65.07	873	599	
1964 53B		877	USSR	28 AUG	99.6	65.11	811	668	
1964 54A	OSO 1	879	US	5 SEP	3341.9	40.72	144824	4930	\$136.200\$400.250
									\$400.350
									136.147
1964 60A	EXPLORER 21	889	US	4 OCT	2080.3	33.72	98288	917	
1964 63A		893	US	6 OCT	106.3	89.92	1076	1039	
1964 63B		897	US	6 OCT	106.6	89.92	1082	1059	
1964 63C		900	US	6 OCT	106.6	89.92	1085	1053	
1964 63D		901	US	6 OCT	106.6	89.91	1080	1063	
1964 63E		902	US	6 OCT	106.6	89.93	1084	1058	
1964 63F		903	US	6 OCT	106.6	89.91	1089	1055	
1964 64A	EXPLORER 22	899	US	10 OCT	104.8	79.71	1081	888	\$136.171\$162\$324
									\$20\$40\$41\$360
1964 64B		907	US	10 OCT	104.7	79.72	1080	888	
1964 64C		976	US	10 OCT	104.1	79.36	1068	835	
1964 64D		977	US	10 OCT	105.5	80.08	1119	919	
1964 69A	COSMOS 49	913	USSR	24 OCT	89.1	48.92	241	204	
1964 72A		922	US	4 NOV	94.9	82.04	524	510	
1964 72B		925	US	4 NOV	94.8	82.04	520	502	
1964 72C		926	US	4 NOV	94.4	82.06	498	488	
1964 72D		927	US	4 NOV	94.5	82.02	500	488	
1964 73A	MARINER 3	923	US	5 NOV	HELIOCENTRIC ORBIT				
1964 74A	EXPLORER 23	924	US	6 NOV	99.2	51.97	977	464	\$136.078\$136.861
1964 76A	EXPLORER 24	931	US	21 NOV	115.7	81.43	2413	559	136.709
1964 76B	EXPLORER 25	932	US	21 NOV	116.2	81.38	2494	530	\$136.292\$136.860
1964 76C		933	US	21 NOV	116.2	81.38	2493	533	
1964 76D		934	US	21 NOV	116.1	81.34	2474	537	
1964 76E		935	US	21 NOV	116.3	81.37	2490	538	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1964 LAUNCHES (CONT'D)									
1964 76F		936	US	21 NOV	115.7	81.31	2417	569	
1964 76G		937	US	21 NOV	116.4	81.35	2485	551	
1964 76H		939	US	21 NOV	115.3	81.32	2382	556	
1964 76I		940	US	21 NOV	116.1	81.41	2464	545	
1964 76J		941	US	21 NOV	116.2	81.36	2485	541	
1964 76K		960	US	21 NOV	116.4	81.39	2385	552	
1964 76L		1411	US	21 NOV	116.4	89.39	2497	540	
1964 77A	MARINER 4	938	US	28 NOV	HELIOCENTRIC ORBIT				
1964 77B		942	US	28 NOV	HELIOCENTRIC ORBIT				
1964 78C	ZOND 2	945	USSR	30 NOV	HELIOCENTRIC ORBIT				
1964 80A	COSMOS 51	947	USSR	9 DEC	91.0	48.75	397	243	
1964 83A		953	US	13 DEC	106.0	89.99	1066	1019	
1964 83B		956	US	13 DEC	106.3	90.00	1085	1028	
1964 83C		959	US	13 DEC	106.3	89.99	1092	1023	
1964 83D		965	US	13 DEC	106.3	89.98	1089	1025	
1964 83E		966	US	13 DEC	106.3	89.99	1095	1029	
1964 83F		967	US	13 DEC	106.3	89.99	1088	1025	
1964 83G		1099	US	13 DEC	106.3	89.98	1077	1037	
1964 84A	SAN MARCO 1	957	ITALY	15 DEC	90.7	37.78	406	186	
1964 86A	EXPLORER 26	963	US	21 DEC	453.4	20.16	26058	245	136.650\$162\$320 \$150\$400
1965 LAUNCHES									
1965 03A		973	US	19 JAN	97.6	98.75	836	259	
1965 04A	TIROS 9	978	US	22 JAN	119.2	96.40	2580	709	\$136.234\$136.918
1965 04B		979	US	22 JAN	119.3	96.42	2594	706	
1965 04C		1312	US	22 JAN	118.0	96.35	2514	673	
1965 04D		1313	US	22 JAN	120.4	96.43	2665	733	
1965 06A	COSMOS 53	983	USSR	30 JAN	97.1	48.72	1011	219	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCL- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 06B		984	USSR	30 JAN	95.6	48.72	865	224	
1965 07A	ORB. SOL. OBS. 2	987	US	3 FEB	96.5	32.84	631	545	136.713
1965 07B		988	US	3 FEB	96.5	32.85	632	551	
1965 08A		1000	US	11 FEB	145.6	32.12	2799	2779	
1965 08B		1001	US	11 FEB	145.4	32.12	2794	2762	
1965 08C		1002	US	11 FEB	145.7	32.12	2806	2779	
1965 09A	PEGASUS 1	1085	US	16 FEB	97.0	31.75	729	498	\$136.410;136.890
1965 09B		1088	US	16 FEB	97.1	31.74	734	499	
1965 10B		1087	US	17 FEB	BARYCENTRIC ORBIT				
1965 11A	COSMOS 54	1089	USSR	21 FEB	104.4	56.05	1668	258	
1965 11B	COSMOS 55	1090	USSR	21 FEB	104.6	56.03	1682	261	
1965 11C	COSMOS 56	1091	USSR	21 FEB	103.7	56.04	1603	259	
1965 11D		1092	USSR	21 FEB	105.9	56.13	1815	260	
1965 11E		1094	USSR	21 FEB	100.9	56.07	1330	263	
1965 14A		1097	USSR	26 FEB	96.8	65.03	641	569	
1965 14B	COSMOS 58	1098	USSR	26 FEB	96.9	65.07	690	529	
1965 16A	GREB	1271	US	9 MAR	103.5	70.08	940	910	
1965 16B	GRAVITY GRADIENT II	1244	US	9 MAR	103.5	70.08	940	910	
1965 16C	GRAVITY GRADIENT III	1292	US	9 MAR	103.5	70.09	940	910	
1965 16D	SOLAR RAD.	1291	US	9 MAR	103.5	70.08	940	910	136.766
1965 16E	EGRS III	1208	US	9 MAR	103.5	70.09	939	910	136.800
1965 16F	OSCAR III	1293	US	9 MAR	103.5	70.10	939	910	136.840
1965 16G	SURCAL	1310	US	9 MAR	103.5	70.10	938	910	
1965 16H	DODECAHEDRON	1272	US	9 MAR	103.5	70.09	940	909	
1965 16J	ROCKET BODY	1245	US	9 MAR	103.5	70.11	941	906	
1965 17B	EGRS II	1250	US	11 MAR	97.6	89.98	1001	291	
1965 17C		1228	US	11 MAR	97.5	89.98	988	289	
1965 17D		1248	US	11 MAR	97.5	90.00	989	292	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCL- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 17F		1249	US	11 MAR	92.6	89.99	536	254	
1965 17H		1323	US	11 MAR	95.3	89.98	790	279	
1965 20A	COSMOS 61	1267	USSR	15 MAR	104.6	56.02	1675	265	
1965 20B	COSMOS 62	1268	USSR	15 MAR	104.4	56.05	1666	262	
1965 20C	COSMOS 63	1269	USSR	15 MAR	103.8	56.03	1607	262	
1965 20D		1270	USSR	15 MAR	103.4	56.16	1582	247	
1965 20E		1335	USSR	15 MAR	112.2	56.15	2055	599	
1965 20F		1336	USSR	15 MAR	106.5	56.16	1787	341	
1965 20G		1337	USSR	15 MAR	105.1	56.06	1666	327	
1965 20H		1338	USSR	15 MAR	105.8	56.27	1725	335	
1965 20J		1339	USSR	15 MAR	107.5	56.01	1759	464	
1965 20K		1340	USSR	15 MAR	105.3	56.13	1765	252	
1965 20L		1341	USSR	15 MAR	106.6	56.06	1804	336	
1965 20M		1342	USSR	15 MAR	107.7	56.10	1870	366	
1965 20N		1343	USSR	15 MAR	105.0	56.10	1674	305	
1965 20P		1344	USSR	15 MAR	105.9	56.16	1802	275	
1965 20Q		1345	USSR	15 MAR	108.8	56.07	1892	449	
1965 20R		1346	USSR	15 MAR	108.8	56.16	1921	418	
1965 20S		1347	USSR	15 MAR	109.6	56.12	1811	601	
1965 20T		1348	USSR	15 MAR	109.5	56.19	1940	466	
1965 20U		1349	USSR	15 MAR	108.5	56.12	1895	417	
1965 20V		1350	USSR	15 MAR	100.8	56.08	1295	279	
1965 20W		1351	USSR	15 MAR	109.2	55.98	1914	463	
1965 20X		1352	USSR	15 MAR	105.3	56.09	1733	279	
1965 20Y		1353	USSR	15 MAR	100.8	56.05	1285	294	
1965 20Z		1354	USSR	15 MAR	107.5	56.06	1824	400	
1965 20AA		1355	USSR	15 MAR	104.4	56.17	1679	247	
1965 20AC		1370	USSR	15 MAR	109.7	56.04	1829	596	
1965 20AD		1371	USSR	15 MAR	109.4	55.89	1843	551	

OBJECTS IN ORBIT

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	PERIOD MINUTES	INCLI- NATION	APOGEE Km	PERIGEE Km	TRANSMITTING FREQ. (MC/S)
1965 LAUNCHES (CONT'D)									
1965 20AE		1372	USSR	15 MAR	110.8	56.03	1936	592	
1965 20AF		1373	USSR	15 MAR	109.8	56.08	1973	467	
1965 20AG		1375	USSR	15 MAR	98.0	55.94	1099	196	
1965 20AH		1392	USSR	15 MAR	110.2	55.98	1930	547	
1965 20AJ		1397	USSR	15 MAR	107.3	56.16	1822	383	
1965 20AK		1398	USSR	15 MAR	108.9	56.39	1958	395	
1965 20AL		1400	USSR	15 MAR	99.6	56.02	1197	275	
1965 20AM		1401	USSR	15 MAR	102.5	56.22	1505	242	
1965 20AN		1402	USSR	15 MAR	105.0	56.15	1716	268	
1965 20AP		1403	USSR	15 MAR	100.6	55.99	1285	275	
1965 20AQ		1409	USSR	15 MAR	104.6	56.08	1635	313	
1965 20AR		1410	USSR	15 MAR	104.8	56.14	1692	277	
1965 20AS		1416	USSR	15 MAR	105.8	56.21	1778	280	
1965 20AT		1417	USSR	15 MAR	96.6	56.04	903	260	
1965 20AV		1438	USSR	15 MAR	108.3	56.07	1805	494	
1965 20AW		1436	USSR	15 MAR	103.0	56.05	1570	215	
1965 20AX		1437	USSR	15 MAR	99.6	56.09	1176	278	
1965 20AY		1419	USSR	15 MAR	96.6	55.95	734	213	
1965 20AZ		1439	USSR	15 MAR	108.5	55.91	1862	253	
1965 20BA		1476	USSR	15 MAR	105.6	56.09	1737	310	
1965 20BB		1477	USSR	15 MAR	113.3	55.59	1918	837	
1965 20BC		1478	USSR	15 MAR	112.3	56.18	1976	690	
1965 20BD		1479	USSR	15 MAR	115.5	56.06	2102	858	
1965 20BE		1480	USSR	15 MAR	115.6	56.11	2142	821	
1965 20BF		1481	USSR	15 MAR	108.7	56.19	1849	489	
1965 20BG		1482	USSR	15 MAR	100.7	55.96	1374	202	
1965 20BH		1483	USSR	15 MAR	107.9	56.20	1886	374	
1965 20BJ		1484	USSR	15 MAR	107.6	56.10	1850	376	
1965 20BK		1485	USSR	15 MAR	107.2	55.95	1792	401	
1965 20BL		1486	USSR	15 MAR	106.2	56.11	1747	353	
1965 20BM		1487	USSR	15 MAR	106.1	56.03	1728	363	
1965 20BN		1488	USSR	15 MAR	105.3	56.12	1743	271	
1965 20BP		1489	USSR	15 MAR	104.5	56.15	1652	286	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 20BQ		1490	USSR	15 MAR	102.6	55.73	1480	275	
1965 20BR		1491	USSR	15 MAR	98.8	56.11	1113	268	
1965 20BS		1492	USSR	15 MAR	100.5	56.07	1291	273	
1965 20BT		1493	USSR	15 MAR	104.9	56.23	1694	208	
1965 20BU		1494	USSR	15 MAR	95.3	56.07	822	194	
1965 20BV		1495	USSR	15 MAR	100.0	55.96	1318	186	
1965 20BW		1496	USSR	15 MAR	104.2	56.08	1590	317	
1965 20BX		1497	USSR	15 MAR	106.0	55.88	1732	346	
1065 20BY		1498	USSR	15 MAR	102.8	56.10	1518	261	
1965 20BZ		1499	USSR	15 MAR	104.1	56.06	1599	299	
1965 21A		1273	US	18 MAR	97.5	99.01	753	532	
1965 21B		1288	US	18 MAR	95.7	99.20	610	498	
1965 21C		1289	US	18 MAR	97.6	99.01	759	527	
1965 21D		1290	US	18 MAR	95.4	99.06	608	471	
1965 21E		1376	US	18 MAR	96.4	98.99	665	515	
1965 21F		1463	US	18 MAR	98.6	98.99	857	533	
1965 23B		1298	US	21 MAR	BARYCENTRIC ORBIT				
1965 27A	EGRS IV	1314	US	3 APR	111.5	90.19	1315	1280	
1965 27B		1315	US	3 APR	111.4	90.21	1314	1275	
1965 27C		1316	US	3 APR	111.5	90.21	1313	1281	
1965 27D		1389	US	3 APR	111.5	90.20	1314	1280	
1965 27E		1399	US	3 APR	111.5	90.20	1319	1276	
1965 28A	EARLY BIRD	1317	US	6 APR	1437.3	.13	36596	35025	
1965 28B	ROCKET BODY	1318	US	6 APR	CURRENT ELEMENTS NOT MAINTAINED				
1965 30A	MOLNIA 1	1324	USSR	23 APR	720.4	65.21	39874	614	
1965 31B		1329	US	28 APR	95.1	95.22	547	505	
1965 31G		1357	US	28 APR	94.8	95.22	528	494	
1965 32A	EXPLORER 27	1328	US	29 APR	107.8	41.17	1315	937	
									\$137.740\$162\$324
									\$20\$40\$41\$360

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 32B		1358	US	29 APR	107.8	41.12	1315	935	
1965 34A		1359	US	6 MAY	157.0	32.13	3745	2778	
1965 34B		1360	US	6 MAY	309.9	32.10	14797	2785	
1965 34C		1361	US	6 MAY	145.6	32.13	2800	2775	
1965 38A		1377	US	20 MAY	100.0	98.63	968	552	
1965 38B		1378	US	20 MAY	100.0	98.63	968	553	
1965 38C		1379	US	20 MAY	99.9	98.65	959	556	
1965 38D		1380	US	20 MAY	99.5	98.75	922	546	
1965 38E		1460	US	20 MAY	101.0	98.67	1058	554	
1965 38F		1462	US	20 MAY	98.9	98.58	860	560	
1965 38G		1475	US	20 MAY	100.1	98.61	980	554	
1965 39A	PEGASUS 2	1381	US	25 MAY	97.2	31.76	732	510	\$135.410;136.889
1965 39B	ROCKET BODY	1385	US	25 MAY	97.2	31.76	738	509	
1965 42A	EXPLORER 28	1388	US	29 MAY	8558.8	33.86	264247	196	136.125
1965 44A	LUNIK 6	1398	USSR	8 JUN	HELIOCENTRIC ORBIT				
1965 48A		1420	US	24 JUN	106.9	90.00	1146	1025	
1965 48B		1425	US	24 JUN	106.9	90.00	1142	1026	
1965 48C		1428	US	24 JUN	106.6	90.00	1110	1030	
1965 48D		1435	US	24 JUN	106.9	90.00	1160	1012	
1965 50A		1422	US	25 JUN	94.6	107.64	508	497	
1965 50D		1427	US	25 JUN	94.5	107.64	502	491	
1965 51A	TIROS 10	1430	US	2 JUL	100.7	98.62	837	745	\$136.232\$136.924
1965 51B		1433	US	2 JUL	100.7	98.65	839	748	
1965 51C		1440	US	2 JUL	99.3	98.50	837	619	
1965 52A	COSMOS 70	1431	USSR	2 JUL	98.1	48.76	1112	224	
1965 52B		1432	USSR	2 JUL	98.0	48.76	1089	230	
1965 52C		1434	USSR	2 JUL	95.7	48.84	847	255	
1965 53A	COSMOS 71	1441	USSR	16 JUL	95.3	56.05	544	519	
1965 53B	COSMOS 72	1442	USSR	16 JUL	95.9	56.06	586	540	
1965 53C	COSMOS 73	1443	USSR	16 JUL	95.6	56.07	557	538	
1965 53D	COSMOS 74	1444	USSR	16 JUL	96.2	56.04	615	541	
1965 53E	COSMOS 75	1445	USSR	16 JUL	96.5	56.04	643	542	
1965 53F		1448	USSR	16 JUL	96.6	56.08	644	546	

OBJECTS IN ORBIT

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>PERIOD MINUTES</u>	<u>INCLI- NATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1965 LAUNCHES (CONT'D)									
1965 53G		1449	USSR	16 JUL	95.2	56.05	541	513	
1965 53H		1473	USSR	16 JUL	96.7	56.08	661	541	
1965 54A	PROTON 1	1466	USSR	16 JUL	91.9	63.46	540	180	
1965 54B		1451	USSR	16 JUL	91.6	63.47	511	174	
1965 55A		1447	US	17 JUL	94.4	70.18	514	471	
1965 55B		1452	US	17 JUL	94.3	70.17	509	466	
1965 55C		1455	US	17 JUL	94.5	70.18	518	476	
1965 56A	ZOND 3	1454	USSR	18 JUL	HELIOCENTRIC ORBIT				
1965 57A		1457	US	19 JUL	89.9	85.06	303	178	
1965 58A		1458	US	20 JUL	5148.2	35.27	96201	88571	
1965 58B		1459	US	20 JUL	6726.1	34.99	121475	101835	
1965 58C		1460	US	20 JUL	2610.6	34.39	112694	153	136.768
1965 59A		1464	USSR	23 JUL	92.2	48.78	504	255	
1965 59B		1465	USSR	23 JUL	92.0	48.78	488	256	
1965 60A	PEGASUS 3	1467	US	30 JUL	95.2	28.87	534	516	
1965 60B		1468	US	30 JUL	95.2	28.86	536	518	
1965 62B		1472	US	3 AUG	94.7	107.35	511	504	
1965 63A		1502	US	10 AUG	122.2	69.23	2429	1134	
1965 64A	CENTAUR 6	1503	US	11 AUG	CURRENT ELEMENTS NOT MAINTAINED				
1965 65A		1504	US	13 AUG	108.1	90.02	1194	1089	
1965 65B		1508	US	13 AUG	107.8	90.03	1158	1093	
1965 65C		1510	US	13 AUG	108.7	90.02	1183	1095	
1965 65D		1511	US	13 AUG	108.3	90.28	1152	1123	
1965 65E		1512	US	13 AUG	108.1	90.00	1190	1023	
1965 66A	COSMOS 78	1505	USSR	14 AUG	89.5	69.04	330	178	
1965 66B		1507	USSR	14 AUG	89.7	68.98	299	227	
1965 66C		1509	USSR	14 AUG	89.2	69.04	281	200	

\$136.410;136.590

* APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.
 ** TWO HUNDRED AND SIX METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED
 WITH 1961 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED
 CAN BE FOUND IN THE DECAYED OBJECTS LIST.
 § TRANSMITTING ON COMMAND ONLY.
 & TRANSMITTING WHEN IN SUNLIGHT ONLY.
 # NO CATALOGUE NUMBER ASSIGNED.

DECAYED OBJECTS

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1957 LAUNCHES					
ALPHA 1	ROCKET BODY	001	USSR	4 OCT	1 DEC 57
ALPHA 2	SPUTNIK 1	002	USSR	4 OCT	EARLY JAN 58
BETA 1	SPUTNIK 2	003	USSR	3 NOV	14 APR 58
1958 LAUNCHES					
GAMMA 1	EXPLORER 3	006	US	26 MAR	28 JUN 58
DELTA 1	ROCKET BODY	007	USSR	15 MAY	3 DEC 58
DELTA 2	SPUTNIK 3	008	USSR	15 MAY	6 APR 60
EPSILON 1	EXPLORER 4	009	US	26 JUL	23 OCT 59
ZETA 1	SCORE	010	US	18 DEC	21 JAN 59
ETA 1	PIONEER 1	110	US	11 OCT	12 OCT 58
THETA 1	PIONEER 3	111	US	6 DEC	7 DEC 58
1959 LAUNCHES					
BETA 1	DISCOVERER 1	013	US	28 FEB	EARLY MAR 59
GAMMA 1	DISCOVERER 2	014	US	13 APR	26 APR 59
DELTA 1	EXPLORER 6	015	US	7 AUG	PRIOR JUL 61
DELTA 2	ROCKET BODY	017	US	7 AUG	PRIOR JUL 61
EPSILON 1	DISCOVERER 5	018	US	13 AUG	28 SEP 59
EPSILON 2	CAPSULE	026	US	13 AUG	11 FEB 61
ZETA 1	DISCOVERER 6	019	US	19 AUG	20 OCT 59
THETA 1	LUNIK 3	021	USSR	4 OCT	MAR 60
KAPPA 1	DISCOVERER 7	024	US	7 NOV	26 NOV 59
LAMBDA 1	DISCOVERER 8	025	US	20 NOV	8 MAR 60
XI 1	LUNIK 2	114	USSR	12 SEP	13 SEP 59 *****

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1960 LAUNCHES					
GAMMA 1	ROCKET BODY	030	US	13 APR	18 AUG 60
GAMMA 3	METAL OBJECT	033	US	13 APR	JUL 60
DELTA 1	DISCOVERER 11	032	US	15 APR	26 APR 60
EPSILON 1	SPUTNIK 4	034	USSR	15 MAY	5 SEP 62
EPSILON 2	ROCKET BODY	035	USSR	15 MAY	17 JUL 60
EPSILON 4	NONE	037	USSR	15 MAY	PRIOR JUL 61
EPSILON 5	NONE	038	USSR	15 MAY	SEP-OCT 60
EPSILON 6	NONE	039	USSR	15 MAY	24 SEP 60
EPSILON 7	NONE	040	USSR	15 MAY	24 SEP 60
EPSILON 8	NONE	041	USSR	15 MAY	SEP-OCT 60
EPSILON 9	NONE	042	USSR	15 MAY	SEP-OCT 60
ZETA 2	METAL OBJECT	044	US	24 MAY	5 DEC 60
THETA 1	DISCOVERER 13	048	US	10 AUG	14 NOV 60
THETA 1#	CAPSULE	NNA	US	10 AUG	11 AUG 60 **
KAPPA 1	DISCOVERER 14	054	US	18 AUG	16 SEP 60
KAPPA 1#	CAPSULE	NNA	US	18 AUG	19 AUG 60 **
LAMBDA 1	SPUTNIK 5	055	USSR	19 AUG	20 AUG 60 *
LAMBDA 2	ROCKET BODY	056	USSR	19 AUG	23 SEP 60
MU 1	DISCOVERER 15	057	US	13 SEP	18 OCT 60
MU 1#	CAPSULE	NNA	US	13 SEP	15 SEP 60 ***
OMICRON 1	DISCOVERER 17	061	US	12 NOV	29 DEC 60
OMICRON 1#	CAPSULE	NNA	US	12 NOV	14 NOV 60
RHO 1	SPUTNIK 6	065	USSR	1 DEC	2 DEC 60
RHO 2	ROCKET BODY	066	USSR	1 DEC	2 DEC 60
SIGMA 1#	CAPSULE	NNA	US	7 DEC	10 DEC 60 **
SIGMA 1	DISCOVERER 18	067	US	7 DEC	2 APR 61
TAU 1	DISCOVERER 19	068	US	20 DEC	23 JAN 61

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1961 LAUNCHES					
BETA 1	SPUTNIK 7	071	USSR	4 FEB	26 FEB 61
BETA 2	ROCKET BODY	072	USSR	4 FEB	12-13 FEB 61
BETA 3	NONE	073	USSR	4 FEB	17 MAR 61
GAMMA 2	ROCKET BODY	076	USSR	12 FEB	18 FEB 61
GAMMA 3	SPUTNIK 8	077	USSR	12 FEB	24 FEB 61
GAMMA 4	NONE	078	USSR	12 FEB	13-18 FEB 61
DELTA 1	EXPLORER 9	081	US	16 FEB	9 APR 64
DELTA 4	NONE	086	US	16 FEB	PRIOR JUL 61
EPSILON 1	DISCOVERER 20	083	US	17 FEB	28 JUL 62
EPSILON 2	NONE	088	US	17 FEB	30 MAR-2 APR 61
EPSILON 3	NONE	089	US	17 FEB	20 APR 61
EPSILON 4	NONE	090	US	17 FEB	31 OCT 61
ZETA 1	DISCOVERER 21	084	US	18 FEB	20 APR 62
ETA 1	TRANSIT 3B & LOFTI	087	US	22 FEB	30 MAR 61
THETA 1	SPUTNIK 9	091	USSR	9 MAR	9 MAR 61 *
THETA 2	NONE	092	USSR	9 MAR	10 MAR 61
THETA 3	NONE	093	USSR	9 MAR	10 MAR 61
THETA 4	NONE	094	USSR	9 MAR	10 MAR 61
IOTA 1	SPUTNIK 10	095	USSR	25 MAR	25 MAR 61
IOTA 2	ROCKET BODY	096	USSR	25 MAR	26 MAR 61
IOTA 3	NONE	097	USSR	25 MAR	26 MAR 61
LAMBDA 1	DISCOVERER 23	100	US	8 APR	16 APR 62
LAMBDA 2	CAPSULE	102	US	8 APR	23 MAY 62
LAMBDA 3	NONE	106	US	8 APR	10 SEP 61
MU 1	VOSTOK 1	103	USSR	12 APR	12 APR 61 ****
MU 2	ROCKET BODY	104	USSR	12 APR	16 APR 61
XI 1#	CAPSULE	NNA	US	16 JUN	18 JUN 61 **
XI 1	DISCOVERER 25	108	US	16 JUN	12 JUL 61
XI 2	NONE	109	US	16 JUN	19 JUN 61

DECAYED OBJECTS (CONT'D)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1961 LAUNCHES (CONT'D)					
OMICRON 25	METAL OBJECT	140	US	29 JUN	30 SEP 62
OMICRON 28	METAL OBJECT	143	US	29 JUN	16 JUN 62
OMICRON 46	METAL OBJECT	171	US	29 JUN	29 JAN 62
OMICRON 62	METAL OBJECT	231	US	29 JUN	13 FEB 65
PI 1	DISCOVERER 26	160	US	7 JUL	5 DEC 61
PI 1#	CAPSULE	NNA	US	8 JUL	9 JUL 61 **
SIGMA 2	METAL OBJECT	164	US	12 JUL	24 JUL 61
TAU 1	VOSTOK 2	168	USSR	6 AUG	7 AUG 61 ***
TAU 2	ROCKET BODY	169	USSR	6 AUG	9 AUG 61
PHI 1	RANGER 1	173	US	23 AUG	30 AUG 61
PHI 2	ROCKET BODY	174	US	23 AUG	3 SEP 61
CHI 1	EXPLORER 13	180	US	25 AUG	28 AUG 61
PSI 1	DISCOVERER 29	181	US	30 AUG	10 SEP 61
PSI 1#	CAPSULE	NNA	US	30 AUG	4 SEP 61
OMEGA 1	DISCOVERER 30	182	US	12 SEP	11 DEC 61
OMEGA 1#	CAPSULE	NNA	US	12 SEP	15 SEP 61 **
OMEGA 2	METAL OBJECT	185	US	12 SEP	18 SEP 61
OMEGA 3	METAL OBJECT	187	US	12 SEP	28 SEP 61
A-ALPHA 1	MA-4	183	US	13 SEP	13 SEP 61 **
A-ALPHA 2	ROCKET BODY	184	US	13 SEP	13 SEP 61
A-BETA 1	DISCOVERER 31	186	US	17 SEP	26 OCT 61
A-GAMMA 1	DISCOVERER 32	189	US	13 OCT	13 NOV 61
A-GAMMA 1	CAPSULE	NNA	US	13 OCT	14 OCT 61 **
A-GAMMA 2	METAL OBJECT	190	US	13 OCT	25 OCT 61 **
A-GAMMA 3	METAL OBJECT	191	US	13 OCT	16 OCT 61
A-DELTA 2		193	US	21 OCT	5 DEC 61
A-EPSILON 1	DISCOVERER 34	197	US	5 NOV	7 DEC 62
A-EPSILON 2	METAL OBJECT	198	US	5 NOV	30 NOV 61
A-EPSILON 3	METAL OBJECT	199	US	5 NOV	9 DEC 61

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
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1961 LAUNCHES (CONT'D)

A-EPSILON 4	METAL OBJECT	200	US	5 NOV	10 DEC 61
A-EPSILON 5	METAL OBJECT	203	US	5 NOV	12 DEC 61
A-ZETA 1	DISCOVERER 35	201	US	15 NOV	3 DEC 61
A-ZETA 1#	CAPSULE	NNA	US	15 NOV	16 NOV 61**
A-ZETA 2	METAL OBJECT	207	US	15 NOV	23 NOV 61
A-THETA 1	RANGER 2	206	US	18 NOV	20 NOV 61
A-IOTA 1	MA-5	208	US	29 NOV	29 NOV 61 **
A-IOTA 2	ROCKET BODY	209	US	29 NOV	30 NOV 61
A-KAPPA 1	DISCOVERER 36	213	US	12 DEC	8 MAR 62
A-KAPPA 1#	CAPSULE	NNA	US	12 DEC	16 DEC 61 **
A-KAPPA 2	OSCAR 1	214	US	12 DEC	31 JAN 62
A-KAPPA 3	METAL OBJECT	215	US	12 DEC	19 DEC 61
A-LAMBDA 1		217	US	22 DEC	14 AUG 62
A-LAMBDA 2		218	US	22 DEC	31 DEC 61
A-LAMBDA 3		219	US	22 DEC	9 JAN 62

1962 LAUNCHES

GAMMA 1	FRIENDSHIP 7	240	US	20 FEB	20 FEB 62*****
GAMMA 2	ROCKET BODY	241	US	20 FEB	21 FEB 62
DELTA 1		242	US	21 FEB	4 MAR 62
EPSILON 1	DISCOVERER 38	247	US	27 FEB	21 MAR 62
EPSILON 1#	CAPSULE	NNA	US	27 FEB	3 MAR 62 **
EPSILON 2	ROCKET BODY	248	US	27 FEB	3 MAR 62
EPSILON 3	METAL OBJECT	249	US	27 FEB	3 MAR 62
EPSILON 4	METAL OBJECT	251	US	27 FEB	7 MAR 62
ETA 1		256	US	7 MAR	7 JUN 63
ETA 2		258	US	7 MAR	31 MAR 62

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1962 LAUNCHES (CONT'D)					
ETA 3		259	US	7 MAR	3 NOV 62
THETA 1	COSMOS 1	266	USSR	16 MAR	25 MAY 62
THETA 2	ROCKET BODY	267	USSR	16 MAR	18 JUN 62
IOTA 1	COSMOS 2	269	USSR	6 APR	19-20 AUG 63
IOTA 2	ROCKET BODY	270	USSR	6 APR	6 OCT 62
KAPPA 2		272	US	9 APR	4 MAY 62
LAMBDA 1		276	US	18 APR	28 MAY 62
LAMBDA 2		277	US	18 APR	20 APR 62
LAMBDA 3		278	US	18 APR	21 APR 62
LAMBDA 4		279	US	18 APR	21 APR 62
MU 1	RANGER 4	280	US	23 APR	26 APR 62 *****
NU 1	COSMOS 3	281	USSR	24 APR	17 OCT 62
NU 2	ROCKET BODY	283	USSR	24 APR	5 AUG 62
XI 1	COSMOS 4	287	USSR	26 APR	29 APR 62
XI 2	ROCKET BODY	284	USSR	26 APR	17 JUN 62
XI 3	METAL OBJECT	289	USSR	26 APR	3 MAY 62
PI 1		286	US	26 APR	28 APR 62
RHO 1		290	US	29 APR	26 MAY 62
RHO 2		291	US	29 APR	1 MAY 62
SIGMA 1		292	US	15 MAY	26 NOV 63
SIGMA 2		293	US	15 MAY	3 JUL 62
SIGMA 3		294	US	15 MAY	13 JUL 62
TAU 1	AURORA 7	295	US	24 MAY	24 MAY 62 *****
TAU 2	ROCKET BODY	296	US	24 MAY	25 MAY 62
UPSILON 1	COSMOS 5	297	USSR	28 MAY	2 MAY 63
UPSILON 2	ROCKET BODY	298	USSR	28 MAY	15 DEC 62
PHI 1		302	US	30 MAY	11 JUN 62
PHI 2		303	US	30 MAY	2 JUN 62

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1962 LAUNCHES (CONT'D)					
CHI 1		304	US	2 JUN	28 JUN 62
CHI 2	OSCAR 2	305	US	2 JUN	21 JUN 62
CHI 3		306	US	2 JUN	6 JUN 62
PSI 1		307	US	17 JUN	18 JUN 62
OMEGA 1		308	US	18 JUN	29-30 OCT 63
OMEGA 2		310	US	18 JUN	12 JUL 62
OMEGA 3		314	US	18 JUN	14 JUL 62
A-BETA 1		315	US	23 JUN	7 JUL 62
A-GAMMA 1		316	US	28 JUN	14 SEP 62
A-DELTA 1	COSMOS 6	338	USSR	30 JUN	8 AUG 62
A-DELTA 2	ROCKET BODY	339	USSR	30 JUN	8 SEP 62
A-ZETA 1		342	US	18 JUL	25 JUL 62
A-ZETA 2		343	US	18 JUL	27 JUL 62
A-ETA 1		344	US	21 JUL	14 AUG 62
A-THETA 1		345	US	28 JUL	24 AUG 62
A-IOTA 1	COSMOS 7	346	USSR	28 JUL	1 AUG 62
A-IOTA 2	ROCKET BODY	347	USSR	28 JUL	21 AUG 62
A-IOTA 3	METAL OBJECT	348	USSR	28 JUL	31 JUL 62
A-IOTA 4	METAL OBJECT	349	USSR	28 JUL	30 JUL 62
A-KAPPA 1		360	US	2 AUG	26 AUG 62
A-KAPPA 2		362	US	2 AUG	8 AUG 62
A-LAMBDA 1		361	US	5 AUG	6 AUG 62
A-MU 1	VOSTOK 3	363	USSR	11 AUG	15 AUG 62****
A-MU 2	ROCKET BODY	364	USSR	11 AUG	14 AUG 62
A-NU 1	VOSTOK 4	365	USSR	12 AUG	15 AUG 62****
A-NU 2	ROCKET BODY	366	USSR	12 AUG	14 AUG 62
A-XI 1	COSMOS 8	367	USSR	18 AUG	17 AUG 63

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1962 LAUNCHES (CONT'D)					
A XI 2	ROCKET BODY	368	USSR	18 AUG	19 DEC 62
A PI 1		371	USSR	25 AUG	28 AUG 62
A PI 2		372	USSR	25 AUG	2 SEP 62
A PI 3		373	USSR	25 AUG	31 AUG 62
A PI 4		379	USSR	25 AUG	5 SEP 62
A PI 5		380	USSR	25 AUG	30 AUG 62
A PI 6		376	USSR	25 AUG	6 SEP 62
A PI 7		386	USSR	25 AUG	8 SEP 62
A PI 8		387	USSR	25 AUG	5 SEP 62
A SIGMA 1		377	US	29 AUG	10 SEP 62
A TAU 1		381	USSR	1 SEP	6 SEP 62
A TAU 2		382	USSR	1 SEP	3 SEP 62
A TAU 3		383	USSR	1 SEP	3 SEP-1 OCT 62
A TAU 4		384	USSR	1 SEP	21 SEP 62
A UPSILON 1		385	US	1 SEP	26 OCT 64
A PHI 1		389	USSR	12 SEP	14 SEP 62
A PHI 2		390	USSR	12 SEP	12 SEP 62
A PHI 3		391	USSR	12 SEP	17 SEP 62
A PHI 4		392	USSR	12 SEP	13 SEP 62
A PHI 5		393	USSR	12 SEP	13 SEP 62
A PHI 6		394	USSR	12 SEP	16 SEP 62
A PHI 7		395	USSR	12 SEP	15 SEP 62
A CHI 1		396	US	17 SEP	16 NOV 62
A OMEGA 1		422	USSR	27 SEP	1 OCT 62
A OMEGA 2		423	USSR	27 SEP	22 DEC 62
A OMEGA 3		425	USSR	27 SEP	6 OCT 62
A OMEGA 4		428	USSR	27 SEP	8 OCT 62
A OMEGA 5		429	USSR	27 SEP	4 OCT 62
A OMEGA 6		430	USSR	27 SEP	8 OCT 62

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1962 LAUNCHES (CONT'D)					
A-OMEGA 7		431	USSR	27 SEP	3 OCT 62
A-OMEGA 8		435	USSR	27 SEP	6 OCT 62
B-BETA 1		427	US	29 SEP	14 OCT 62
B-DELTA 1	SIGMA 7	433	US	3 OCT	3 OCT 62*****
B-DELTA 2	ROCKET BODY	434	US	3 OCT	4 OCT 62
B-EPSILON 1		436	US	9 OCT	16 NOV 62
B-ZETA 1		437	USSR	17 OCT	21 OCT 62
B-ZETA 2		438	USSR	17 OCT	5 NOV 62
B-THETA 1		441	USSR	20 OCT	18 MAY 64
B-THETA 2		442	USSR	20 OCT	5 JUN 63
B-IOTA 1		443	USSR	24 OCT	29 OCT 62
B-IOTA 2		456	USSR	24 OCT	22 DEC 62
B-IOTA 3		457	USSR	24 OCT	26 FEB 63
B-IOTA 4		458	USSR	24 OCT	29 NOV 62
B-IOTA 5		459	USSR	24 OCT	24 DEC 62
B-IOTA 6		460	USSR	24 OCT	8 DEC 62
B-IOTA 7		482	USSR	24 OCT	10 DEC 62
B-IOTA 8		483	USSR	24 OCT	2 JAN 63
B-IOTA 9		484	USSR	24 OCT	4 DEC 62
B-IOTA 10		485	USSR	24 OCT	10 DEC 62
B-IOTA 11		486	USSR	24 OCT	30 NOV 62
B-IOTA 12		487	USSR	24 OCT	1 DEC 62
B-IOTA 13		491	USSR	24 OCT	25 DEC 62
B-IOTA 14		492	USSR	24 OCT	15 DEC 62
B-IOTA 15		493	USSR	24 OCT	21 DEC 62
B-IOTA 16		494	USSR	24 OCT	17 DEC 62
B-IOTA 17		495	USSR	24 OCT	26 DEC 62
B-IOTA 18		496	USSR	24 OCT	23 DEC 62
B-IOTA 19		497	USSR	24 OCT	26 DEC 62

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1962 LAUNCHES (CONT'D)					
B-IOTA 20		498	USSR	24 OCT	10 DEC 62
B-IOTA 21		499	USSR	24 OCT	9 DEC 62
B-IOTA 22		500	USSR	24 OCT	28 DEC 62
B-IOTA 23		501	USSR	24 OCT	26 DEC 62
B-IOTA 24		512	USSR	24 OCT	31 DEC 62
B-NU 1		448	USSR	1 NOV	2-3 NOV 62
B-NU 2		449	USSR	1 NOV	3 NOV 62
B-XI 1		451	USSR	4 NOV	5 NOV 62
B-XI 2		452	USSR	4 NOV	8 NOV 62
B-XI 3		454	USSR	4 NOV	19 JAN 63
B-XI 4		488	USSR	4 NOV	25 DEC 62
B-XI 5		489	USSR	4 NOV	27 DEC 62
B-OMICRON 1		453	US	5 NOV	3 NOV 62
B-PI 1		455	US	11 NOV	12 NOV 62
B-RHO 1		481	US	24 NOV	13 DEC 62
B-SIGMA 1		490	US	4 DEC	8 DEC 62
B-TAU 3		507	US	13 DEC	1 JUL 63
B-PHI 1		505	US	14 DEC	8 JAN 63
B-OMEGA 1		517	USSR	22 DEC	30 DEC 62
B-OMEGA 2		518	USSR	22 DEC	22 JAN 63
1963 LAUNCHES					
1963 01A		521	USSR	4 JAN	5 JAN 63
1963 01B		522	USSR	4 JAN	11 JAN 63
1963 01C		524	USSR	4 JAN	11 JAN 63

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1963 LAUNCHES (CONT'D)					
1963 02A		525	US	7 JAN	24 JAN 63
1963 02B		526	US	7 JAN	16 JAN 63
1963 03B		528	US	16 JAN	8 NOV 63
1963 03C		529	US	16 JAN	31 DEC 63
1963 06A		554	USSR	21 MAR	29 MAR 63
1963 06B		555	USSR	21 MAR	9 APR 63
1963 07A		562	US	1 APR	26 APR 63
1963 08A		563	USSR	2 APR	3 APR 63
1963 09B		565	US	3 APR	24 NOV 63
1963 10A	ROCKET BODY	567	USSR	13 APR	29 AUG 63
1963 10B		568	USSR	13 APR	6 JUL 63
1963 11A		569	USSR	22 APR	27 APR 63
1963 11B		570	USSR	22 APR	1 MAY 63
1963 12A		571	USSR	28 APR	8 MAY 63
1963 12B		572	USSR	28 APR	20 MAY 63
1963 15A	FAITH 7	576	US	15 MAY	16 MAY 63 *****
1963 15B	ROCKET BODY	577	US	15 MAY	16 MAY 63
1963 16A		578	US	18 MAY	27 MAY 63
1963 17A		580	USSR	22 MAY	2 JUN 65
1963 17B		581	USSR	22 MAY	26 AUG 63
1963 17C		582	USSR	22 MAY	12 MAY 65
1963 17D		583	USSR	22 MAY	30 AUG 63
1963 17E		584	USSR	22 MAY	25 JUL 63
1963 17F		585	USSR	22 MAY	30 SEP 63
1963 17G		588	USSR	22 MAY	2 APR 64
1963 18A		586	USSR	24 MAY	2 JUN 63
1963 18B		587	USSR	24 MAY	8 JUN 63
1963 19A		590	US	12 JUN	12 JUN 63
1963 20A	VOSTOK 5	591	USSR	14 JUN	19 JUN 63 ****

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1963 LAUNCHES (CONT'D)					
1963 20B		592	USSR	14 JUN	16 JUN 63
1963 21A		593	US	15 JUN	7 AUG 63
1963 21B	LOFTI 2A	601	US	15 JUN	18 JUL 63
1963 21C	SOLAR RADIATION	599	US	15 JUN	1 AUG 63
1963 21D		600	US	15 JUN	30 JUL 63
1963 21E		598	US	15 JUN	27 JUL 63
1963 21F		597	US	15 JUN	5 JUL 63
1963 21G		617	US	15 JUN	3 JUL 63
1963 23A	VOSTOK 6	595	USSR	16 JUN	19 JUN 63 ****
1963 23B		596	USSR	16 JUN	18 JUN 63
1963 25A		609	US	27 JUN	26 JUL 63
1963 27B		615	US	29 JUN	14-15 NOV 64
1963 27C		616	US	29 JUN	10 JUL 63
1963 28A		618	US	12 JUL	18 JUL 63
1963 28B		619	US	12 JUL	13 JUL 63
1963 28C		620	US	12 JUL	16 JUL 63
1963 29A		621	US	18 JUL	13 AUG 63
1963 29B		623	US	18 JUL	29 JUL 63
1963 32A		626	US	31 JUL	11 AUG 63
1963 32B		627	US	31 JUL	10 AUG 63
1963 33A		632	USSR	6 AUG	30 MAR 64
1963 33B		633	USSR	6 AUG	8-9 DEC 63
1963 34A		636	US	24 AUG	12 SEP 63
1963 34B		642	US	24 AUG	8 SEP 63
1963 35A		637	US	29 AUG	7 NOV 63
1963 35B		638	US	29 AUG	23-29 SEP 63
1963 35C		639	US	29 AUG	2 SEP 63
1963 35D		640	US	29 AUG	1 SEP 63
1963 36A		641	US	26 SEP	13 SEP 63
1963 36B		663	US	6 SEP	13-14 SEP 63
1963 36C		664	US	6 SEP	10 SEP 63

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1963 LAUNCHES (CONT'D)					
1963 36D		665	US	6 SEP	8 SEP 63
1963 36E		666	US	6 SEP	10-11 SEP 63
1963 36F		667	US	6 SEP	10 SEP 63
1963 37A		668	US	24 SEP	12 OCT 63
1963 40A		673	USSR	18 OCT	28-29 OCT 63
1963 40B		676	USSR	18 OCT	30-31 OCT 63
1963 41A	COSMOS 20	677	US	25 OCT	29 OCT 63
1963 41B		678	US	25 OCT	28-29 OCT 63
1963 41C		679	US	25 OCT	28-29 OCT 63
1963 41D		680	US	25 OCT	28-29 OCT 63
1963 42A		681	US	29 OCT	21 JAN 64
1963 42B		682	US	29 OCT	23 MAY 65
1963 43C		691	US	29 OCT	27 NOV 63
1963 44A	COSMOS 21	687	USSR	11 NOV	14 NOV 63
1963 44B		688	USSR	11 NOV	12 NOV 63
1963 45A	COSMOS 22	689	USSR	16 NOV	22 NOV 63
1963 45B		690	USSR	16 NOV	3 DEC 63
1963 48A		695	US	27 NOV	15 DEC 63
1963 50A	COSMOS 23	707	USSR	13 DEC	27 MAR 64
1963 50B		708	USSR	13 DEC	6 MAR 64
1963 50C		709	USSR	13 DEC	3 JAN 64
1963 50D		710	USSR	13 DEC	1 JAN 64
1963 51A		711	US	18 DEC	20 DEC 63
1963 52A	COSMOS 24	712	USSR	19 DEC	28 DEC 63
1963 52B		713	USSR	19 DEC	25 JAN 64
1963 55A		718	US	21 DEC	8 JAN 64
1963 55B		719	US	21 DEC	7 NOV 64
1964 LAUNCHES					
1964 07A	RANGER 6	747	US	30 JAN	2 FEB 64****
1964 08A		752	US	15 FEB	9 MAR 64
1964 08B		755	US	15 FEB	21 FEB 64
1964 09A		754	US	25 FEB	1 MAR 64
1964 09B		756	US	25 FEB	26 FEB 64

DECAYED OBJECTS (CONT'D)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)					
1964 10A	COSMOS 25	757	USSR	27 FEB	21 NOV 64
1964 10B		758	USSR	27 FEB	18 JUN 64
1964 10C		762	USSR	27 FEB	4 MAR 64
1964 10D		763	USSR	27 FEB	23 APR 64
1964 12A		764	US	11 MAR	16 MAR 64
1964 12B		765	US	11 MAR	12 MAR 64
1964 13A	COSMOS 26	776	USSR	18 MAR	28 SEP 64
1964 13B		767	USSR	18 MAR	17 MAY 64
1964 13C		768	USSR	18 MAR	20-22 APR 64
1964 13D		769	USSR	18 MAR	24-25 MAR 64
1964 14A	COSMOS 27	770	USSR	27 MAR	28 MAR 64
1964 14B		772	USSR	27 MAR	29 MAR 64
1964 14C		773	USSR	27 MAR	30-31 MAR 64
1964 14D		774	USSR	27 MAR	3-4 APR 64
1964 16A		776	USSR	2 APR	3 APR 64
1964 16B		777	USSR	2 APR	2 APR 64
1964 16C		778	USSR	2 APR	5 APR 64
1964 17A	COSMOS 28	779	USSR	4 APR	12 APR 64
1964 17B		780	USSR	4 APR	3 MAY 64
1964 17C		781	USSR	4 APR	6-7 APR 64
1964 18A	GEMINI 1	782	US	8 APR	12 APR 64
1964 19A		783	USSR	12 APR	30 APR-1 MAY 64
1964 20A		786	US	23 APR	28-29 APR 64
1964 20B		787	US	23 APR	26 APR 64
1964 20C		788	US	23 APR	25 APR 64
1964 20D		789	US	23 APR	25 APR 64
1964 20E		790	US	23 APR	25 APR 64
1964 21A	COSMOS 29	791	USSR	25 APR	2 MAY 64
1964 21B		792	USSR	25 APR	11 MAY 64
1964 21C		793	USSR	25 APR	26-27 APR 64
1964 21D		794	USSR	25 APR	27-28 APR 64
1964 21E		795	USSR	25 APR	27 APR 64

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)					
1964 27A		796	US	27 APR	26 MAY 64
1964 23A	COSMOS 30	797	USSR	18 MAY	26 MAY 64
1964 23B		798	USSR	18 MAY	7 JUN 64
1964 24A		799	US	19 MAY	22 MAY 64
1964 25A	SATURN 6	800	US	28 MAY	1 JUN 64
1964 27A		802	US	4 JUN	18 JUN 64
1964 28A	COSMOS 31	803	USSR	6 JUN	20 OCT 64
1964 28B		804	USSR	6 JUN	16 AUG 64
1964 29A	COSMOS 32	807	USSR	10 JUN	18 JUN 64
1964 29B		808	USSR	10 JUN	14 JUL 64
1964 29C		810	USSR	10 JUN	12 JUN 64
1964 30A		811	US	13 JUN	2 JUL 64
1964 30B		820	US	13 JUN	7 AUG 64
1964 32A		814	US	19 JUN	16 AUG 64
1964 32B		821	US	19 JUN	2 JUL 64
1964 33A	COSMOS 33	816	USSR	23 JUN	1 JUL 64
1964 33B		817	USSR	23 JUN	10 JUL 64
1964 33C		818	USSR	23 JUN	24 JUN 64
1964 33D		819	USSR	23 JUN	24 JUN 64
1964 34A	COSMOS 34	822	USSR	1 JUL	9 JUL 64
1964 34B		823	USSR	1 JUL	15 JUL 64
1964 36A		825	US	6 JUL	8 JUL 64
1964 36B		826	US	6 JUL	3 JAN 65
1964 36C		827	US	6 JUL	19 JUL 64
1964 37A		828	US	10 JUL	6 JUL 64
1964 39A	COSMOS 35	833	USSR	15 JUL	23 JUL 64
1964 39B		834	USSR	15 JUL	1 AUG 64
1964 39C		835	USSR	15 JUL	31 JUL 64
1964 39D		839	USSR	15 JUL	25 JUL 64
1964 41A	KANGER 7	842	US	28 JUL	31 JUL 64 *****
1964 42A	COSMOS 36	844	USSR	30 JUL	28 FEB 65
1964 42B		845	USSR	30 JUL	29 NOV 64

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)					
1964 43A		846	US	5 AUG	31 AUG-1 SEP 64
1964 44A	COSMOS 37	848	USSR	14 AUG	22 SEP 64
1964 44B		849	USSR	14 AUG	3 SEP 64
1964 45A		850	US	14 AUG	23 SEP 64
1964 45C		852	US	14 AUG	16 AUG 64
1964 46A	COSMOS 38	853	USSR	18 AUG	8 NOV 64
1964 46B	COSMOS 39	854	USSR	18 AUG	17 NOV 64
1964 46C	COSMOS 40	855	USSR	18 AUG	18 NOV 64
1964 46D		856	USSR	18 AUG	19 FEB 65
1964 46E		857	USSR	18 AUG	10 SEP 64
1964 46F		859	USSR	18 AUG	6 SEP 64
1964 46G		860	USSR	18 AUG	6 SEP 64
1964 48A		861	US	21 AUG	31 MAR 65
1964 49A	COSMOS 41	863	USSR	22 AUG	15 SEP 64
1964 49B		865	USSR	22 AUG	28 SEP 64
1964 49C		868	USSR	22 AUG	30 AUG 64
1964 50B		866	USSR	22 AUG	2 AUG 65
1964 55A		880	USSR	13 SEP	18 SEP 64
1964 55B		881	USSR	13 SEP	27 SEP 64
1964 56A		882	US	14 SEP	6 OCT 64
1964 56B		888	US	14 SEP	22 SEP 64
1964 57A	SATURN 7	883	US	18 SEP	22 SEP 64
1964 58A		884	US	23 SEP	28 SEP 64
1964 58B		887	US	23 SEP	26 SEP 64
1964 59A	COSMOS 46	885	USSR	24 SEP	2 OCT 64
1964 59B		886	USSR	24 SEP	7 OCT 64
1964 61A		890	US	5 OCT	26 OCT 64
1964 62A	COSMOS 47	891	USSR	6 OCT	7 OCT 64
1964 62B		892	USSR	6 OCT	13-14 OCT 64
1964 62C		894	USSR	6 OCT	9 OCT 64
1964 62D		895	USSR	6 OCT	12 OCT 64
1964 62E		896	USSR	6 OCT	9 OCT 64
1964 65A	VOSKHOD 1	904	USSR	12 OCT	13 OCT 64

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)					
1964 65B		905	USSR	12 OCT	20 OCT 64
1964 65C		906	USSR	12 OCT	13 OCT 64
1964 66A	COSMOS 48	908	USSR	14 OCT	20 OCT 64
1964 66B		909	USSR	14 OCT	28 OCT 64
1964 66C		910	USSR	14 OCT	16 OCT 64
1964 67A		911	US	17 OCT	4 NOV 64
1964 68A		912	US	23 OCT	28 OCT 64
1964 68B		914	US	23 OCT	23 FEB 65
1964 68C		916	US	23 OCT	3-4 NOV 64
1964 68D		918	US	23 OCT	29 OCT 64
1964 69C		917	USSR	24 OCT	17 NOV 64
1964 69B		915	USSR	24 OCT	10 FEB 65
1964 70A	COSMOS 50	919	USSR	28 OCT	5 NOV 64
1964 70B		920	USSR	28 OCT	1-2 NOV 64
1964 70C		928	USSR	28 OCT	13 NOV 64
1964 70D		929	USSR	28 OCT	15 NOV 64
1964 70E		989	USSR	28 OCT	13 NOV 64
1964 70F		990	USSR	28 OCT	11 NOV 64
1964 70G		991	USSR	28 OCT	8 NOV 64
1964 70H		992	USSR	28 OCT	13 NOV 64
1964 70J		993	USSR	28 OCT	12 NOV 64
1964 70K		994	USSR	28 OCT	13 NOV 64
1964 70L		995	USSR	28 OCT	11 NOV 64
1964 70M		996	USSR	28 OCT	12 NOV 64
1964 70N		997	USSR	28 OCT	14 NOV 64
1964 70P		998	USSR	28 OCT	10 NOV 64
1964 70Q		999	USSR	28 OCT	12 NOV 64
1964 70R		1003	USSR	28 OCT	11 NOV 64

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1964 LAUNCHES (CONT'D)					
1964 70S		1004	USSR	28 OCT	14 NOV 64
1964 70T		1005	USSR	28 OCT	12 NOV 64
1964 70U		1006	USSR	28 OCT	12 NOV 64
1964 70V		1007	USSR	28 OCT	12 NOV 64
1964 70W		1008	USSR	28 OCT	12 NOV 64
1964 70X		1009	USSR	28 OCT	13 NOV 64
1964 70Y		1010	USSR	28 OCT	13 NOV 64
1964 70Z		1011	USSR	28 OCT	9 NOV 64
1964 70AA		1012	USSR	28 OCT	10 NOV 64
1964 70AB		1013	USSR	28 OCT	9 NOV 64
1964 70AC		1014	USSR	28 OCT	17 NOV 64
1964 70AD		1015	USSR	28 OCT	12 NOV 64
1964 70AE		1016	USSR	28 OCT	13 NOV 64
1964 70AF		1017	USSR	28 OCT	11 NOV 64
1964 70AG		1018	USSR	28 OCT	13 NOV 64
1964 70AH		1019	USSR	28 OCT	11 NOV 64
1964 70AJ		1020	USSR	28 OCT	14 NOV 64
1964 70AK		1021	USSR	28 OCT	13 NOV 64
1964 70AL		1022	USSR	28 OCT	12 NOV 64
1964 70AM		1023	USSR	28 OCT	12 NOV 64
1964 70AN		1024	USSR	28 OCT	14 NOV 64
1964 70AP		1025	USSR	28 OCT	13 NOV 64
1964 70AQ		1026	USSR	28 OCT	12 NOV 64
1964 70AR		1027	USSR	28 OCT	12 NOV 64
1964 70AS		1028	USSR	28 OCT	13 NOV 64
1964 70AT		1029	USSR	28 OCT	12 NOV 64
1964 70AU		1030	USSR	28 OCT	13 NOV 64

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1964 LAUNCHES (CONT'D)					
1964 70AV		1031	USSR	28 OCT	13 NOV 64
1964 70AW		1032	USSR	28 OCT	16 NOV 64
1964 70AX		1033	USSR	28 OCT	11 NOV 64
1964 70AY		1034	USSR	28 OCT	9 NOV 64
1964 70AZ		1035	USSR	28 OCT	13 NOV 64
1964 70BA		1036	USSR	28 OCT	12 NOV 64
1964 70BB		1037	USSR	28 OCT	12 NOV 64
1964 70BC		1038	USSR	28 OCT	15 NOV 64
1964 70BD		1039	USSR	28 OCT	13 NOV 64
1964 70BE		1040	USSR	28 OCT	13 NOV 64
1964 70BF		1041	USSR	28 OCT	12 NOV 64
1964 70BG		1042	USSR	28 OCT	13 NOV 64
1964 70BH		1043	USSR	28 OCT	12 NOV 64
1964 70BJ		1044	USSR	28 OCT	17 NOV 64
1964 70BK		1045	USSR	28 OCT	17 NOV 64
1964 70BL		1046	USSR	28 OCT	12 NOV 64
1964 70BM		1047	USSR	28 OCT	11 NOV 64
1964 70BN		1048	USSR	28 OCT	14 NOV 64
1964 70BP		1049	USSR	28 OCT	15 NOV 64
1964 70BQ		1050	USSR	28 OCT	14 NOV 64
1964 70BR		1051	USSR	28 OCT	12 NOV 64
1964 70BS		1052	USSR	28 OCT	13 NOV 64
1964 70BT		1053	USSR	28 OCT	13 NOV 64
1964 70BU		1054	USSR	28 OCT	13 NOV 64
1964 70BV		1055	USSR	28 OCT	11 NOV 64
1964 70BW		1056	USSR	28 OCT	13 NOV 64
1964 70BX		1057	USSR	28 OCT	11 NOV 64
1964 70BY		1058	USSR	28 OCT	11 NOV 64
1964 70BZ		1059	USSR	28 OCT	10 NOV 64
1964 70CA		1060	USSR	28 OCT	9 NOV 64
1964 70CB		1061	USSR	28 OCT	16 NOV 64
1964 70CC		1062	USSR	28 OCT	

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1964 LAUNCHES (CONT'D)					
1964 70CD		1063	USSR	28 OCT	11 NOV 64
1964 70CE		1064	USSR	28 OCT	15 NOV 64
1964 70CF		1065	USSR	28 OCT	17 NOV 64
1964 70CG		1066	USSR	28 OCT	11 NOV 64
1964 70CH		1067	USSR	28 OCT	17 NOV 64
1964 70CJ		1068	USSR	28 OCT	14 NOV 64
1964 70CK		1069	USSR	28 OCT	16 NOV 64
1964 70CL		1070	USSR	28 OCT	13 NOV 64
1964 70CM		1071	USSR	28 OCT	12 NOV 64
1964 70CN		1072	USSR	28 OCT	10 NOV 64
1964 70CP		1073	USSR	28 OCT	12 NOV 64
1964 70CQ		1074	USSR	28 OCT	13 NOV 64
1964 70CR		1075	USSR	28 OCT	13 NOV 64
1964 70CS		1076	USSR	28 OCT	13 NOV 64
1964 70CT		1077	USSR	28 OCT	14 NOV 64
1964 70CU		1078	USSR	28 OCT	12 NOV 64
1964 70CV		1079	USSR	28 OCT	12 NOV 64
1964 70CW		1080	USSR	28 OCT	17 NOV 64
1964 70CX		1081	USSR	28 OCT	11 NOV 64
1964 70CY		1082	USSR	28 OCT	11 NOV 64
1964 70CZ		1083	USSR	28 OCT	11 NOV 64
1964 70DA		1084	USSR	28 OCT	11 NOV 64
1964 71A		921	US	2 NOV	28 NOV 64
1964 75B		930	US	18 NOV	6 DEC 64
1964 78A		943	USSR	30 NOV	1 DEC 64
1964 78B		944	USSR	30 NOV	2 DEC 64
1964 79A		946	US	4 DEC	5 DEC 64
1964 80B		948	USSR	9 DEC	11 MAY 65
1964 80C		950	USSR	9 DEC	29 DEC 64
1964 80D		952	USSR	9 DEC	1 JAN 65
1964 80E		954	USSR	9 DEC	1 JAN 65
1964 80F		955	USSR	9 DEC	2 JAN 65
1964 81A		949	US	10 DEC	13 DEC 64

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)					
1964 82A	CENTAUR 4	951	US	11 DEC	12 DEC 64
1964 84B		958	US	15 DEC	6-7 FEB 65
1964 84C		962	US	15 DEC	21 JAN 65
1964 85A		961	US	19 DEC	14 JAN 65
1964 87A		964	US	21 DEC	11 JAN 65
1965 LAUNCHES					
1965 01A	COSMOS 52	968	USSR	11 JAN	19 JAN 65
1965 01B		969	USSR	11 JAN	29 JAN 65
1965 01C		970	USSR	11 JAN	13-14 JAN 65
1965 01D		971	USSR	11 JAN	13-14 JAN 65
1965 02A		972	US	15 JAN	9 FEB 65
1965 02B		982	US	15 JAN	30 JAN 65
1965 03B		974	US	19 JAN	17 JUN 65
1965 03C		975	US	19 JAN	9 JUL 65
1965 05A		980	US	23 JAN	28-29 JAN 65
1965 05B		981	US	23 JAN	25 JAN 65
1965 06C		985	USSR	30 JAN	4-5 MAR 65
1965 06D		986	USSR	30 JAN	4 MAR 65
1965 10A		1086	US	17 FEB	20 FEB 65 *****
1965 12A		1093	USSR	22 FEB	22 FEB 65
1965 12B		1095	USSR	22 FEB	5-6 MAR 65
1965 12C		1100	USSR	22 FEB	9 MAR 65
1965 12D		1101	USSR	22 FEB	25 FEB 65
1965 12E		1102	USSR	22 FEB	26 FEB 65
1965 12F		1103	USSR	22 FEB	2 MAR 65
1965 12G		1104	USSR	22 FEB	10 MAR 65
1965 12H		1105	USSR	22 FEB	25 FEB 65
1965 12J		1106	USSR	22 FEB	2 MAR 65
1965 12K		1107	USSR	22 FEB	25 MAR 65

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1965 LAUNCHES (CONT'D)					
1965 12L		1108	USSR	22 FEB	1 MAR 65
1965 12M		1109	USSR	22 FEB	26 FEB 65
1965 12N		1110	USSR	22 FEB	27 FEB 65
1965 12P		1111	USSR	22 FEB	2 MAR 65
1965 12Q		1112	USSR	22 FEB	1 MAR 65
1965 12R		1113	USSR	22 FEB	25 FEB 65
1965 12S		1114	USSR	22 FEB	3 MAR 65
1965 12T		1115	USSR	22 FEB	27 FEB 65
1965 12U		1116	USSR	22 FEB	4 MAR 65
1965 12V		1117	USSR	22 FEB	2 MAR 65
1965 12W		1118	USSR	22 FEB	1 MAR 65
1965 12X		1119	USSR	22 FEB	1 MAR 65
1965 12Y		1120	USSR	22 FEB	2 MAR 65
1965 12Z		1121	USSR	22 FEB	1 MAR 65
1965 12AA		1122	USSR	22 FEB	1 MAR 65
1965 12AB		1123	USSR	22 FEB	1 MAR 65
1965 12AC		1124	USSR	22 FEB	27 FEB 65
1965 12AD		1125	USSR	22 FEB	2 MAR 65
1965 12AE		1126	USSR	22 FEB	1 MAR 65
1965 12AF		1127	USSR	22 FEB	28 FEB 65
1965 12AG		1128	USSR	22 FEB	3 MAR 65
1965 12AH		1129	USSR	22 FEB	3 MAR 65
1965 12AJ		1130	USSR	22 FEB	11 MAR 65
1965 12AK		1131	USSR	22 FEB	7 MAR 65
1965 12AL		1132	USSR	22 FEB	7 MAR 65
1965 12AM		1133	USSR	22 FEB	21 MAR 65
1965 12AN		1134	USSR	22 FEB	19 MAR 65
1965 12AP		1135	USSR	22 FEB	13 MAR 65
1965 12AQ		1136	USSR	22 FEB	17 MAR 65
1965 12AR		1137	USSR	22 FEB	9 MAR 65
1965 12AS		1138	USSR	22 FEB	8 MAR 65

DECAYED OBJECTS (CONT'D)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)					
1965 12AT		1139	USSR	22 FEB	10 MAR 65
1965 12AU		1140	USSR	22 FEB	25 MAR 65
1965 12AV		1141	USSR	22 FEB	10 MAR 65
1965 12AW		1142	USSR	22 FEB	14 MAR 65
1965 12AX		1143	USSR	22 FEB	20 MAR 65
1965 12AY		1144	USSR	22 FEB	21 MAR 65
1965 12AZ		1145	USSR	22 FEB	21 MAR 65
1965 12BA		1146	USSR	22 FEB	17 MAR 65
1965 12BB		1147	USSR	22 FEB	17 MAR 65
1965 12BC		1148	USSR	22 FEB	11 MAR 65
1965 12BD		1149	USSR	22 FEB	19 MAR 65
1965 12BE		1150	USSR	22 FEB	17 MAR 65
1965 12BF		1151	USSR	22 FEB	10 MAR 65
1965 12BG		1152	USSR	22 FEB	16 MAR 65
1965 12BH		1153	USSR	22 FEB	7 MAR 65
1965 12BJ		1154	USSR	22 FEB	7 MAR 65
1965 12BK		1155	USSR	22 FEB	7 MAR 65
1965 12BL		1156	USSR	22 FEB	18 MAR 65
1965 12BM		1157	USSR	22 FEB	13 MAR 65
1965 12BN		1158	USSR	22 FEB	4 MAR 65
1965 12BP		1159	USSR	22 FEB	18 MAR 65
1965 12BQ		1160	USSR	22 FEB	4 MAR 65
1965 12BR		1161	USSR	22 FEB	5 MAR 65
1965 12BS		1162	USSR	22 FEB	25 MAR 65
1965 12BT		1163	USSR	22 FEB	5 MAR 65
1965 12BU		1164	USSR	22 FEB	13 MAR 65
1965 12BV		1165	USSR	22 FEB	9 MAR 65
1965 12BW		1166	USSR	22 FEB	7 MAR 65
1965 12BX		1167	USSR	22 FEB	20 MAR 65
1965 12BY		1168	USSR	22 FEB	6 MAR 65
1965 12BZ		1169	USSR	22 FEB	5 MAR 65

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1965 LAUNCHES (CONT'D)					
1965 12CA		1170	USSR	22 FEB	4 MAR 65
1965 12CB		1171	USSR	22 FEB	5 MAR 65
1965 12CC		1172	USSR	22 FEB	5 MAR 65
1965 12CD		1173	USSR	22 FEB	4 MAR 65
1965 12CE		1174	USSR	22 FEB	22 MAR 65
1965 12CF		1175	USSR	22 FEB	5 MAR 65
1965 12CG		1176	USSR	22 FEB	5 MAR 65
1965 12CH		1177	USSR	22 FEB	27 MAR 65
1965 12CJ		1178	USSR	22 FEB	5 MAR 65
1965 12CK		1179	USSR	22 FEB	16 MAR 65
1965 12CL		1180	USSR	22 FEB	4 MAR 65
1965 12CM		1181	USSR	22 FEB	6 MAR 65
1965 12CN		1182	USSR	22 FEB	7 MAR 65
1965 12CP		1183	USSR	22 FEB	8 MAR 65
1965 12CQ		1184	USSR	22 FEB	7 MAR 65
1965 12CR		1185	USSR	22 FEB	11 MAR 65
1965 12CS		1186	USSR	22 FEB	1 MAR 65
1965 12CT		1187	USSR	22 FEB	1 MAR 65
1965 12CU		1188	USSR	22 FEB	1 MAR 65
1965 12CV		1189	USSR	22 FEB	1 MAR 65
1965 12CW		1190	USSR	22 FEB	1 MAR 65
1965 12CX		1194	USSR	22 FEB	16 MAR 65
1965 12CY		1195	USSR	22 FEB	9 MAR 65
1965 12CZ		1196	USSR	22 FEB	9 MAR 65
1965 12DA		1197	USSR	22 FEB	21 MAR 65
1965 12DB		1198	USSR	22 FEB	4 MAR 65
1965 12DC		1199	USSR	22 FEB	17 MAR 65
1965 12DD		1200	USSR	22 FEB	11 MAR 65
1965 12DE		1201	USSR	22 FEB	4 MAR 65
1965 12DF		1202	USSR	22 FEB	9 MAR 65
1965 12DG		1203	USSR	22 FEB	14 MAR 65

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1965 12DH		1204	USSR	22 FEB	15 MAR 65
1965 12DJ		1205	USSR	22 FEB	16 MAR 65
1965 12DK		1206	USSR	22 FEB	9 MAR 65
1965 12DL		1209	USSR	22 FEB	11 MAR 65
1965 12DM		1210	USSR	22 FEB	4 MAR 65
1965 12DN		1211	USSR	22 FEB	16 MAR 65
1965 12DP		1212	USSR	22 FEB	12 MAR 65
1965 12DQ		1213	USSR	22 FEB	14 MAR 65
1965 12DR		1214	USSR	22 FEB	20 MAR 65
1965 12DS		1215	USSR	22 FEB	16 MAR 65
1965 12DT		1216	USSR	22 FEB	17 MAR 65
1965 12DU		1217	USSR	22 FEB	28 MAR 65
1965 12DV		1218	USSR	22 FEB	20 MAR 65
1965 12DW		1219	USSR	22 FEB	14 MAR 65
1965 12DX		1220	USSR	22 FEB	12 MAR 65
1965 12DY		1221	USSR	22 FEB	18 MAR 65
1965 12DZ		1222	USSR	22 FEB	12 MAR 65
1965 12EA		1223	USSR	22 FEB	31 MAR 65
1965 12EB		1224	USSR	22 FEB	16 MAR 65
1965 12EC		1225	USSR	22 FEB	14 MAR 65
1965 12ED		1226	USSR	22 FEB	18 MAR 65
1965 12EE		1227	USSR	22 FEB	11 MAR 65
1965 12EF		1229	USSR	22 FEB	29 MAR 65
1965 12EG		1230	USSR	22 FEB	13 MAR 65
1965 12EH		1231	USSR	22 FEB	17 MAR 65
1965 12EJ		1232	USSR	22 FEB	24 MAR 65
1965 12EK		1233	USSR	22 FEB	20 MAR 65
1965 12EL		1234	USSR	22 FEB	20 MAR 65
1965 12EM		1235	USSR	22 FEB	17 MAR 65
1965 12EN		1236	USSR	22 FEB	17 MAR 65
1965 12EP		1237	USSR	22 FEB	20 MAR 65
1965 12EQ		1238	USSR	22 FEB	17 MAR 65

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>CATALOGUE NUMBER</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1965 LAUNCHES (CONT'D)					
1965 12ER		1239	USSR	22 FEB	29 MAR 65
1965 12ES		1240	USSR	22 FEB	17 MAR 65
1965 12ET		1241	USSR	22 FEB	17 MAR 65
1965 12EU		1242	USSR	22 FEB	24 MAR 65
1965 12EV		1243	USSR	22 FEB	17 MAR 65
1965 12EW		1254	USSR	22 FEB	12 MAR 65
1965 12EX		1255	USSR	22 FEB	20 MAR 65
1965 12EY		1256	USSR	22 FEB	21 MAR 65
1965 12EZ		1257	USSR	22 FEB	21 MAR 65
1965 12FA		1258	USSR	22 FEB	17 MAR 65
1965 12FB		1261	USSR	22 FEB	6 APR 65
1965 12FC		1262	USSR	22 FEB	15 MAR 65
1965 12FD		1263	USSR	22 FEB	21 MAR 65
1965 12FE		1264	USSR	22 FEB	26 MAR 65
1965 12FF		1265	USSR	22 FEB	15 MAR 65
1965 12FG		1266	USSR	22 FEB	6 MAR 65
1965 12FH		1275	USSR	22 FEB	21 MAR 65
1965 12FJ		1276	USSR	22 FEB	20 MAR 65
1965 12FK		1277	USSR	22 FEB	25 MAR 65
1965 12FL		1278	USSR	22 FEB	22 MAR 65
1965 12FM		1279	USSR	22 FEB	31 MAR 65
1965 12FN		1280	USSR	22 FEB	24 MAR 65
1965 12FP		1281	USSR	22 FEB	19 MAR 65
1965 12FQ		1282	USSR	22 FEB	21 MAR 65
1965 12FR		1283	USSR	22 FEB	23 MAR 65
1965 12FS		1284	USSR	22 FEB	19 MAR 65
1965 12FT		1295	USSR	22 FEB	20 MAR 65
1965 12FU		1296	USSR	22 FEB	15 MAR 65
1965 12FV		1297	USSR	22 FEB	22 MAR 65
1965 12FW		1299	USSR	22 FEB	20 MAR 65
1965 12FX		1300	USSR	22 FEB	23 MAR 65
1965 12FY		1304	USSR	22 FEB	28 MAR 65
1965 12FZ		1309	USSR	22 FEB	28 MAR 65

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)					
1965 13A		1096	US	25 FEB	18 MAR 65
1965 13B		1193	US	25 FEB	10-11 MAR 65
1965 15A	COSMOS 59	1191	USSR	7 MAR	15 MAR 65
1965 15B		1192	USSR	7 MAR	19 MAR 65
1965 15C		1207	USSR	7 MAR	10-11 MAR 65
1965 17A		1303	US	11 MAR	14 JUN 65
1965 17E		1251	US	11 MAR	1 AUG 65
1965 17G		1319	US	11 MAR	28 JUN 65
1965 18A	COSMOS 60	1246	USSR	12 MAR	17 MAR 65
1965 18B		1252	USSR	12 MAR	16-17 MAR 65
1965 18C		1253	USSR	12 MAR	15 MAR 65
1965 19A		1247	US	12 MAR	17 MAR 65
1965 19B		1259	US	12 MAR	16 MAR 65
1965 19C		1260	US	12 MAR	21 MAR 65
1965 20AB		1356	USSR	15 MAR	14 AUG 65
1965 20AU		1418	USSR	15 MAR	10 AUG 65
1965 22A	VOSKHOD 2	1274	USSR	18 MAR	19 MAR 65
1965 22B		1285	USSR	18 MAR	27 MAR 65
1965 22C		1286	USSR	18 MAR	25 MAR 65
1965 22D		1287	USSR	18 MAR	19 MAR 65
1965 23A	RANGER 9	1294	US	21 MAR	24 MAR 65
1965 24A	GT-3	1301	US	23 MAR	23 MAR 65 *****
1965 24B		1302	US	23 MAR	24 MAR 65
1965 25A	COSMOS 64	1305	USSR	25 MAR	2 APR 65
1965 25B		1306	USSR	25 MAR	4 APR 65
1965 25C		1308	USSR	25 MAR	26 APR 65
1965 26A		1307	US	25 MAR	4-5 APR 65
1965 29A	COSMOS 65	1320	USSR	17 APR	25 APR 65
1965 29B	ROCKET BODY	1321	USSR	17 APR	6 MAY 65

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)					
1965 29C		1322	USSR	17 APR	20 APR 65
1965 30B		1325	USSR	23 APR	20 JUL 65
1965 30C	ROCKET BODY	1326	USSR	23 APR	2 JUL 65
1965 31A		1327	US	28 APR	3 MAY 65
1965 31C		1331	US	28 APR	30 APR 65
1965 31D		1332	US	28 APR	30 APR 65
1965 31E		1333	US	28 APR	3-4 MAY 65
1965 31F		1334	US	28 APR	8 MAY 65
1965 33A		1330	US	29 APR	26 MAY 65
1965 33B		1367	US	29 APR	8 JUN 65
1965 35A	COSMOS 56	1362	USSR	7 MAY	15 MAY 65
1965 35B		1363	USSR	7 MAY	24 MAY 65
1965 35C		1364	USSR	7 MAY	9 MAY 65
1965 35D		1365	USSR	7 MAY	9 MAY 65
1965 36A	LUNIK 5	1366	USSR	9 MAY	12 MAY 65
1965 36B		1368	USSR	9 MAY	10 MAY 65
1965 36C		1369	USSR	9 MAY	10 MAY 65
1965 37A		1374	US	18 MAY	16 JUN 65
1965 37B		1415	US	18 MAY	2 JUN 65
1965 40A	COSMOS 67	1382	USSR	25 MAY	2 JUN 65
1965 40B	ROCKET BODY	1383	USSR	25 MAY	4 JUN 65
1965 40C		1384	USSR	25 MAY	30-31 MAY 65
1965 40D		1387	USSR	25 MAY	30-31 MAY 65
1965 41A		1386	US	27 MAY	1 JUN 65
1965 43A	GT-4	1390	US	3 JUN	7 JUN 65
1965 43B	ROCKET BODY	1391	US	3 JUN	5 JUN 65
1965 44B		1394	USSR	8 JUN	12 JUN 65
1965 44C		1395	USSR	8 JUN	10 JUN 65
1965 45A		1396	US	9 JUN	22 JUN 65
1965 45B		1414	US	9 JUN	20 JUN 65
1965 46A	COSMOS 68	1404	USSR	15 JUN	23 JUN 65

DECAYED OBJECTS (CONTINUED)

OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)					
1965 46B		1405	USSR	15 JUN	7 JUL 65
1965 46C		1406	USSR	15 JUN	20 JUN 65
1965 46D		1407	USSR	15 JUN	19 JUN 65
1965 46E		1408	USSR	15 JUN	19 JUN 65
1965 47A		1412	US	18 JUN	29 JUN 65
1965 47B		1413	US	18 JUN	21 JUN 65
1965 49A	COSMOS 69	1421	USSR	25 JUN	3 JUL 65
1965 49B		1423	USSR	25 JUN	6 JUL 65
1965 49C		1429	USSR	25 JUN	30 JUN 65
1965 50B		1424	US	25 JUN	30 JUN 65
1965 50C		1426	US	25 JUN	27 JUN 65
1965 54C		1450	USSR	16 JUL	24 JUL 65
1965 54D		1446	USSR	16 JUL	31 JUL 65
1965 56B		1453	USSR	18 JUL	20 JUL 65
1965 56C	COSMOS 77	1456	USSR	18 JUL	21 JUL 65
1965 61A		1459	USSR	3 AUG	11 AUG 65
1965 61B		1470	USSR	3 AUG	8 AUG 65
1965 62A		1471	US	3 AUG	7 AUG 65
1965 62C		1474	US	3 AUG	6 AUG 65

* USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY
** SUCCESSFUL IE-ENTRY AND RECOVERY
*** SUCCESSFUL IE-ENTRY, BUT NOT RECOVERY
**** USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY OF MANNED SPACE VEHICLE
***** HIT MOON
***** US SUCCESSFULLY ORBITED AND RECOVERED A MANNED SPACE VEHICLE